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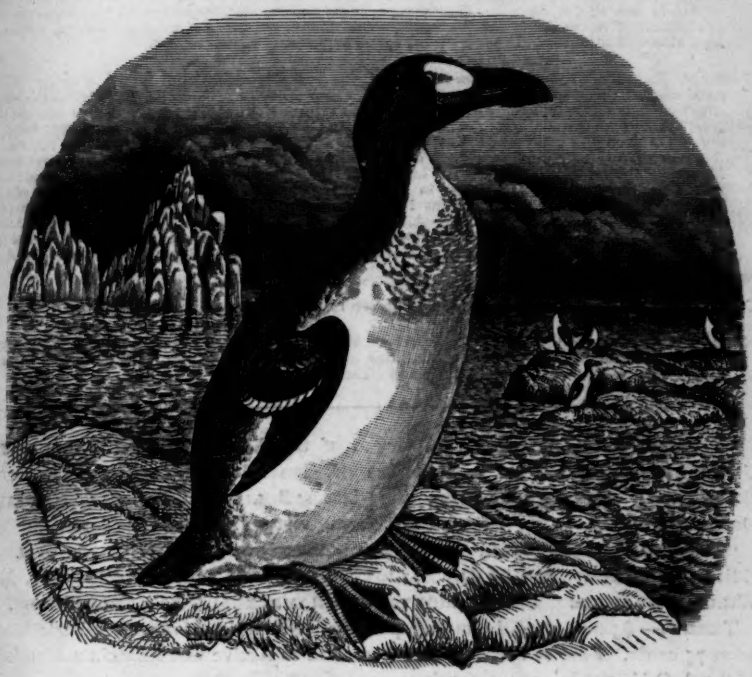

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'THE AUK,' published as the Organ of the AMERICAN ORNITHOLOGISTS' UNION, is conducted as a **Magazine of General Ornithology.** In general character it differs little from the late 'BULLETIN OF THE NUTTALL ORNITHOLOGICAL CLUB,' of which it forms virtually a Second Series.

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THE AUK:

A QUARTERLY JOURNAL OF ORNITHOLOGY.

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THE BIRDS OF WESTERN MANITOBA.

BY ERNEST E. T. SETON.

For the sake of conciseness and convenience of reference I will first distinguish the various natural divisions of the country.

1. The Assiniboine Valley, or first prairie steppe. This includes all of Manitoba south and west of a line drawn from Pembina Mountain north, just west of Portage la Prairie, and thence northwest to Fort Pelly. This line is also the eastern edge of the cretaceous formation. The district is essentially a prairie region, the only wooded tracts of any extent being the flat tops of the elevated table lands, known as Pembina, Turtle, Riding, and Duck Mountains. The first two are at the United States Boundary. The others are on the northeast edge of this region. Carberry is just north of the Assiniboine River, about the center of the region. The Big Plain is an unusually flat prairie, between Carberry and the Riding Mountain. The Big Swamp is a spruce and tamarac swamp, between Carberry and the river. Moose Mountain is just outside and west of Manitoba, at the head of the Souris River. Qu'Appelle is on the Qu'Appelle River, outside and west of Manitoba, one hundred miles up the river from its junction with the Assiniboine.

The observations for the region are my own, as I have visited nearly every part of it. I have, however, received much valuable

assistance from Mr. G. F. Guernsey, who is responsible for the records from Qu'Appelle.

2. The Red River Valley. This includes the country east of the first region, south of the large lakes, west of the 96th meridian, and north of the United States Boundary. This also is a prairie region, but of lower level than the preceding and characterized by extensive tracts of marsh. It is partially wooded in the southwest. Geologically it is chiefly Silurian on the east side of the river, and Devonian on the west. Long Lake is a long, marshy body of water lying just west of Winnipeg. Shoal Lake is an extensive marshy lake near the southeast end of Lake Manitoba. Although I have visited this region myself, my notes are chiefly from information supplied by Mr. Wm. L. Hine of Winnipeg, and Mr. C. W. Nash of Portage la Prairie.

3. The Winnipegoosis Basin. This includes the country which drains into Lakes Winnipegoosis and Manitoba. This is a forest region, and is apparently all of the Devonian formation. Red Deer Lake and River, and Swan Lake and River empty into the northwest end of Lake Winnipegoosis. Waterhen River and Lake empty into the same lake on the east. Porcupine Mountain is at the northwest point of the region. Manitoba House is on the east side of Lake Manitoba, thirty miles south of the narrows. I have visited this region myself, but my information is chiefly based on notes by Professor Macoun.

The fauna of the basin of Lake Winnipeg appears to resemble that of the Winnipegoosis region, but as yet almost nothing is known of the district. Norway House, on the Nelson River at the north end of the Lake, is outside of the province, but is referred to in several brief notes on distribution.

Except when otherwise stated, all records for the Assiniboine region are to be accredited to myself; all for Red River region to Mr. Hine; all for the Winnipegoosis region to Professor John Macoun of the Canadian Geological Survey; and all for the Nelson River region to Professor Robert Bell of the Canadian Geological Survey. And I would here take the opportunity of thanking these gentlemen for their courteous assistance.

By "all over," I mean in suitable places throughout the Red River and Assiniboine Valleys. The generalization is sometimes based on the occurrence of a species in five or six chief localities, but usually on more extensive observation. Dates for arrival and

departure are given for Carberry and are approximate. "Summer resident" means also breeding. The nomenclature is that of the new A. O. U. Check List. The local English names are added after the English name of the A. O. U. List.

1. **Æchmophorus occidentalis.** WESTERN GREBE.—Tolerably common summer resident in Red River Valley, chiefly towards the north. Quite common at Shoal Lake, near Lake Manitoba. "Breeding on Lake Manitoba and very abundantly in the marshes of Waterhen River, between it and Lake Winnipegoosis."

2. **Colymbus holbœllii.** HOLBŒLL'S GREBE.—Rare summer resident in Red River Valley. "Breeds abundantly in the marshes of Waterhen River."

3. **Colymbus auritus.** HORNED GREBE.—Abundant summer resident all over. April to October.

4. **Colymbus nigricollis californicus.** AMERICAN EARED GREBE.—"Breeding abundantly on Turtle Mountain and at points along the Mouse [Souris] River" (*Coues*). "Quite common in the western prairie regions" (*Macoun*).

5. **Podilymbus podiceps.** PIED-BILLED GREBE. DABCHICK.—Common summer resident all over.

6. **Urinator imber.** LOON.—Tolerably common summer resident on the large lakes and rivers only. "Common only on the northern lakes in forest (Winnipegoosis) country." Nelson River District.

7. **Urinator lumme.** RED-THROATED LOON.—Tolerably common summer resident about the large lakes. Breeds on Duck Mountain, and not uncommon in the Upper Assiniboine Valley. Common in Red River Valley. Found at Norway House.

8. **Larus argentatus smithsonianus.** AMERICAN HERRING GULL.—Apparently of general distribution. "Breeding in *all* the large prairie lakes" (*Macoun*). Breeds in great numbers at Lake Winnipeg (*Gunn*).

9. **Larus delawarensis.** RING-BILLED GULL.—Apparently of general distribution. "Breeding in all the lakes of any size" (*Macoun*). Breeds in considerable numbers in the swamps of the Saskatchewan (*Richardson*). Lake Winnipeg (*Hine*).

10. **Larus franklinii.** FRANKLIN'S GULL. ROSY GULL.—Noted only as a common spring migrant on the Big Plain. Abundant and breeding in the marshes of the Red River Valley. "Breeding abundantly on Lake Winnipegoosis." Breeds at Selkirk and at Lake Manitoba (*Gunn*).

11. **Larus philadelphia.** BONAPARTE'S GULL.—"Breeding on all the large lakes of the prairie region" (*Macoun*). "Common fall migrant at Winnipeg." Breeds near Shoal Lake (*Gunn*).

12. **Sterna forsteri.** FORSTER'S TERN.—"Breeding abundantly on Lake Manitoba, Waterhen River, and Lake Winnipegoosis." Breeds at Shoal Lake, Selkirk, and Lake Winnipeg (*Gunn*).

13. **Sterna hirundo.** COMMON TERN.—Common summer resident on the large lakes. "Breeding with the preceding" (*Macoun*). Occurs at Winnipeg (*Hine*).

14. **Hydrochelidon nigra surinamensis**. BLACK TERN.—Abundant summer resident all over. Arrives May 20; departs August 30.

15. **Hydrochelidon leucoptera**.—WHITE-WINGED BLACK TERN.—"Six of these birds seen on a small lake near the source of the western branch of Swan River on September 1, 1881. One of these was shot and examined, but owing to our lack of food and hurried movements it was not skinned" (*Macoun*). I give this as it stands and assume no responsibility.

16. **Phalacrocorax dilophus**. DOUBLE-CRESTED CORMORANT. CROW DUCK.—At Qu'Appelle, "summer visitant, breeding." "Breeding on Lake Winnipegoosis." Occasional on Red River. Once observed at Pembina (*Coues*). Common on Lake Winnipeg (*Hine*). Breeds at Shoal Lake (*Gunn*).

17. **Pelecanus erythrorhynchos**. AMERICAN WHITE PELICAN.—Apparently of general distribution. At Qu'Appelle, "Common, breeding at the lakes; have seen flocks of upwards of five hundred in the migrating season." Not observed in middle Assiniboine region. Common in Red River Valley, breeding about the large lakes. "Breeding on Lake Winnipegoosis."

18. **Merganser americanus**. AMERICAN MERGANSER. SHELDRAKE.—At Qu'Appelle, "Tolerably common summer resident." Breeding abundantly in the rivers emptying into Lake Winnipegoosis." "Rare" in Red River Valley.

19. **Merganser serrator**. RED-BREASTED MERGANSER. FISH DUCK.—At Qu'Appelle, "Tolerably common summer resident." "Breeds in all the northern streams" (*Macoun*). Rare in Red River Valley.

20. **Lophodytes cucullatus**. HOODED MERGANSER.—Tolerably common summer resident all over. "Very common in streams around the Porcupine Mountain."

21. **Anas boschas**. MALLARD.—Very abundant summer resident all over. "The most abundant Duck of the Northwest, breeding near all marshes north of the boundary" (*Macoun*). This includes the Winnipegoosis region. Nelson River; abundant. Arrives April 15; departs late in October.

22. **Anas obscura**. BLACK DUCK.—Very rare. Three or four specimens taken at Long Lake in four years.

23. **Anas strepera**. GADWALL.—Very rare in Red River Valley. "Only one specimen shot on the Assiniboine, September, 1881" (*Macoun*). Along the south boundary "abundant, breeding" (*Coues*).

24. **Anas americana**. BALDPATE.—Summer resident. Not common. One taken near Shell River, on the upper Assiniboine, July, 1882. "Frequent on the Assiniboine, 1881" (*Macoun*). Not common in the Red River Valley. In the boundary region, "abundant; breeding" (*Coues*).

25. **Anas carolinensis**. GREEN-WINGED TEAL.—Abundant summer resident all over. "Very common near Norway House; scarce northward." Arrives April 20; departs in October.

26. **Anas discors**. BLUE-WINGED TEAL.—Very abundant summer resident all over. Arrives late in April; departs early in October.

27. **Spatula clypeata**. SHOVELLER.—Common summer resident all over. Lake Winnipeg (*Bell*). Arrives late in April; departs late in October, like the other Ducks, when the frost seals the ponds.

28. **Dafila acuta**. PINTAIL.—Common summer resident all over. Breeds near Norway House. Arrives late in April; departs in October.

29. **Aix sponsa**. WOOD DUCK.—Very rare in Assiniboine Valley. One pair taken on the Big Plain. In Red River Valley, "rare, but a few pairs are always to be found about the creeks flowing into Lake Winnipeg from the south."

30. **Aythya americana**. REDHEAD.—Abundant summer resident all over. "Breeds abundantly in the marshes of Waterhen River." Arrives in April; departs in October.

31. **Aythya vallisneria**. CANVAS-BACK.—"Fairly common at Lake Manitoba, but not generally breeding" (*Hine*). Breeding on Turtle Mountain (*Coues*).

32. **Aythya marila nearctica**. AMERICAN SCAUP DUCK. BIG BLUE-BILL.—Common summer resident in Red River Valley, and northern part of Assiniboine region at least. "A few breeding on Lake Winnipegoosis, June, 1881." Arrives late in April; departs in October.

33. **Aythya affinis**. LESSER SCAUP DUCK. LITTLE BLUE-BILL.—Very abundant summer resident all over. "Breeding more commonly than the preceding, 1881."

34. **Aythya collaris**. RING-NECKED DUCK. MARSH BLUE-BILL.—In Red River Valley "abundant." "Breeding in the marshes of Waterhen River, 1881."

35. **Glaucionetta clangula americana**. AMERICAN GOLDEN-EYE. WHISTLER. — Near Winnipeg, "common, breeding." Rare, breeding at Portage La Prairie (*Nash*). "Tolerably common" at Qu'Appelle. "A few breed in the Waterhen River marshes." "Breeds at Norway House."

36. **Charitonetta albeola**. BUFFLEHEAD.—Common summer resident all over. Arrives April 15; departs in October.

37. **Oidemia deglandi**. WHITE-WINGED SCOTER.—Found it apparently breeding at Shell River, on the upper Assiniboine, July 6, 1882. At Qu'Appelle it is a "common summer visitant." In the Red River Valley, scarce but regular.

A single specimen of the Surf Scoter (*Oidemia perspicillata*) was taken by Mr. Guernsey at Qu'Appelle in the fall of 1883.

38. **Erismatura rubida**. RUDDY DUCK.—At Qu'Appelle, a common summer visitant. At Portage la Prairie, "very rare summer resident" (*Nash*). Red River Valley, "a few breed each year about Long Lake." At Shoal Lake, breeding (*Nash*). Common and breeding at Turtle Mountain and along the boundary west (*Coues*).

39. **Chen hyperborea nivalis**. GREATER SNOW GOOSE. WAVEY.—Abundant spring migrant all over; less common in the fall. Arrives May 15, and again in October.

40 **Anser albifrons gambeli**. AMERICAN WHITE-FRONTED GOOSE.—Secured one of a pair near Turtle Mountain, May 19, 1882.

41. **Branta canadensis.** CANADA GOOSE. WILD GOOSE.—Tolerably common summer resident all over; abundant in the migrations. Arrives in April; departs late in October.

41 *a*. **Branta canadensis hutchinsi.** HUTCHINS'S GOOSE.—Taken on Red River by Kennicott.

42. **Branta bernicla.** BRANT.—Occurs as a migrant on Big Plain. No specimens taken.

43. **Olor columbianus.** WHISTLING SWAN.—Not uncommon about the large lakes. Not demonstrated to breed.

44. **Olor buccinator.** TRUMPETER SWAN.—This species doubtless occurs as a migrant though I can give no authentic records.

45. **Botaurus lentiginosus.** AMERICAN BITTERN.—Common summer resident all over. Throughout the Winnipegoosis region. North to York Factory. Arrives about the middle of May; departs in October.

46. **Botaurus exilis.** LEAST BITTERN.—One taken by Mr. Hine, near Winnipeg.

47. **Ardea herodias.** GREAT BLUE HERON.—Not noted by me anywhere in the Assiniboine region, though reported a "tolerably common summer resident" at Qu'Appelle. A very rare summer visitant at Portage la Prairie (*Nash*). More common in the Red River Valley. "Shot on Swan River, April 28th, 1881. Not very common." Said to be common on the Duck Mountain.

48. **Nycticorax nycticorax nævius.** BLACK-CROWNED NIGHT HERON.—Rather common summer resident along the Red River and at Shoal Lake.

Professor Macoun gives the Green Heron as "rather common on the Assiniboine, near the mouth of Shell River. September 25, 1881." Surely this remark should refer to the present species, which he omits altogether.

49. **Grus americana.** WHOOPING CRANE. FLYING SHEEP.—Tolerably common migrant all over. "Breeding in the marshes at Moose Mountain" (*Macoun*). Also, I am informed, at Shoal Lake, near the southeast corner of Lake Manitoba.

50. **Grus canadensis.** LITTLE BROWN CRANE. SANDHILL CRANE.—Common summer resident all over. Norway House. Arrives April 21; departs late in September.

51. **Rallus virginianus.** VIRGINIA RAIL.—Summer resident about Winnipeg. Throughout Winnipegoosis region, "not common."

52. **Porzana carolina.** SORA. COMMON RAIL.—Abundant summer resident all over. Have taken half-a-dozen nests in a day, on the Duck Mountain. "Common west of Porcupine Mountain, and at the head of Swan River, September 1, 1881."

53. **Porzana noveboracensis.** YELLOW RAIL. WATER SPARROW.—On the 13th of July, 1883, a specimen of this Rail was brought to me alive by a farmer, who caught it in a slough where he was cutting wild hay. Being just then called away, I placed the bird in a coop, and on my return it was gone. But the record is, I believe, safe, especially as Hutchins reported the species from Hudsons Bay.

54. **Fulica americana.** AMERICAN COOT.—Abundant summer resident all over. Not common in the Winnipegoosis region. Arrives in April; departs late in October.

55. **Phalaropus lobatus.** NORTHERN PHALAROPE.—Rare spring and fall migrant; noted about Winnipeg only.

56. **Phalaropus tricolor.** WILSON'S PHALAROPE.—Common on the prairies in spring in Red River Valley; breeds at Long Lake and at Lake Winnipeg. "Breeding around ponds at Moose Mountain, July 24, 1880" (*Macoun*).

57. **Recurvirostra americana.** AMERICAN AVOCET.—"Very abundant around saline ponds and lakes throughout the Northwest. Shot at the base of the Coteau [du Missouri], July 28, 1880" (*Macoun*). The region referred to is to the southwest, and may be partly within Manitoba. No other records.

58. **Philohela minor.** AMERICAN WOODCOCK.—Very rare summer resident of Red River Valley, as follows. At Winnipeg less than a dozen birds noted during four years. At Portage la Prairie, one or two pairs seen each year (*Nash*).

59. **Gallinago delicata.** WILSON'S SNIPE.—Abundant summer resident all over, including Winnipegoosis region. North to Nelson River. Arrives April 20; departs September 30.

60. **Macrorhampus griseus.** DOWITCHER.—Abundant migrant on the Souris, and probably breeding (*Coues*). Very rare migrant about Winnipeg; observed only in August and September. "Very abundant at Swan Lake House and Red Deer Lake, July and August, 1881."

A specimen of the Stilt Sandpiper (*Micropalama himantopus*) was taken by Professor Macoun, just west of Manitoba, north of the River Qu'Appelle, September 16, 1880.

61. **Tringa canutus.** KNOT. ROBIN SNIPE.—Common migrant along Red River.

62. **Tringa maculata.** PECTORAL SANDPIPER.—A rare migrant in Red River Valley and on Big Plain. Common fall migrant on Turtle Mountain (*Coues*). Apparently common to the west, as it is given "abundant on the great plains and northward during 1881" (*Macoun*). The plains are chiefly outside of Manitoba.

63. **Tringa fuscicollis.** WHITE-RUMPED SANDPIPER.—Observed in large flocks near Shoal Lake (Riding Mountain), June 4, 1884. Also on Duck Mountain, June 8, 1884.

64. **Tringa bairdii.** BAIRD'S SANDPIPER.—Noted as a migrant on the Big Plain. Migrating in small flocks along the Souris River near the Boundary (*Coues*). "Shot on Red Deer River, July 23, 1881."

65. **Tringa minutilla.** LEAST SANDPIPER.—A migrant along Red River. Observed at Turtle Mountain as a migrant (*Coues*). "Shot on Red Deer River, July 23, 1881."

66. **Tringa alpina pacifica.** RED-BACKED SANDPIPER. BLACKHEART. —Common migrant along Red River.

67. **Ereunetes pusillus.** SEMIPALMATED SANDPIPER.—A migrant

along Red River, frequenting the wet prairies. Observed along the Boundary during August (*Coues*). "Shot on Red Deer River, July 23, 1881."

68. **Calidris arenaria.** SANDERLING.—"Abundant on the west shore of Lake Manitoba, June 12, 1881." Numerous about Lake Winnipeg in June (*Kennicott*).

69. **Limosa fedoa.** MARBLED GODWIT.—Common summer resident on the wet prairies near Winnipeg, and on the Plains of the Souris.

70. **Limosa hæmastica.** HUDSONIAN GODWIT.—A rare migrant along Red River.

71. **Totanus melanoleucus.** GREATER YELLOW-LEGS. — Common migrant all over. Very abundant at Red Deer River. Norway House. Spring migration, late in April; fall, early in August.

72. **Totanus flavipes.** YELLOW-LEGS.—Common migrant all over. Abundant throughout the Winnipegoosis region. Nelson River. Chiefly noted in Assiniboine Valley about August 15.

73. **Totanus solitarius.** SOLITARY SANDPIPER.—Rare migrant all over. Frequent throughout the Winnipegoosis region. Abundant fall migrant along the Boundary; possibly breeding (*Coues*).

74. **Symphemia semipalmata.** WILLET.—Tolerably common summer resident on the Souris and Brandon Plains; occasional along the Boundary, from Red River westward (*Coues.*)

75. **Bartramia longicauda.** BARTRAMIAN SANDPIPER. PRAIRIE PLOVER. QUAILY.—Abundant summer resident all over. "Not seen in the forest (Winnipegoosis) region." Arrives May 7; departs August 30.

76. **Tryngites subruficollis.** BUFF-BREASTED SANDPIPER.—Rare migrant along Red River.

77. **Actitis macularia.** SPOTTED SANDPIPER.—Common summer resident all over. Frequent in the Winnipegoosis region. Norway House.

78. **Numenius longirostris.** LONG-BILLED CURLEW.—Rare summer resident on the wet prairies of the Red River, and noted in May, 1882, as tolerably common on the Souris.

79. **Charadrius squatarola.** BLACK-BELLIED PLOVER.—Tolerably common spring migrant on Big Plain. Noted on Riding Mountain June 4, 1884. Common spring migrant along Red River, frequenting fields; returns in large numbers during the summer.

80. **Charadrius dominicus.** AMERICAN GOLDEN PLOVER.—Common spring and fall migrant all over. Affects burnt prairies and ploughed land. Spring migration, middle of May; fall, in August and September.

81. **Ægialitis vocifera.** KILLDEER.—Common summer resident all over. Manitoba House. Arrives late in April; departs last of August.

82. **Ægialitis semipalmata.** SEMIPALMATED PLOVER. RING PLOVER. —Rare migrant. "Occurs along Red River." "Shot on Red Deer River at Salt Springs, July 22, 1881, and at Lake Manitoba." Lake Winnipeg (*Kennicott*).

83. **Ægialitis meloda.** PIPING PLOVER.—"Shot in company with Sanderlings on the shores of Lake Manitoba, June 12, 1881." Four specimens taken at Lake Winnipeg (*Gunn*).

84. **Arenaria interpres.** TURNSTONE.—Along Red River; rare. "Found occasionally about the prairie ponds, and in pairs about Lake Winnipeg; apparently goes further north to breed. Returns about August 15."

85. **Dendragopus canadensis.** CANADA GROUSE.—"Very numerous in the poplar woods to the north of Fort Pelly (*Macoun*). "Abundant in the woods about Lake Winnipeg, but so tame and fearless that its pursuit can scarcely be called sport" (*Hine*).

86. **Bonasa umbellus umbelloides.** GRAY RUFFED GROUSE.—Abundant resident, probably all over, as it was noted on Duck and Riding Mountains, all along the Assiniboine, and about the Big Plain, as well as in the Red River region. Throughout Winnipegoosis region. Exhibits considerable variation of plumage. (See 'Auk' for July, 1885, pp. 270, 271.)

87. **Lagopus lagopus.** WILLOW PTARMIGAN.—Has been taken on the east shore of Lake Winnipeg (*Hine*). Norway House.

88. **Tympanuchus americanus.** PRAIRIE HEN.—In 1872 Dr. Coues wrote: "I have no reason to believe that it occurs at all in Northwestern Minnesota or Northern Dakota." In 1882, when first I visited Manitoba, the species was nearly unknown in the country; the only known specimen having been taken near Winnipeg in 1881. In 1883, Mr. Hine informs me, it began to be common at Pembina. In 1884 it was not only common at Winnipeg, but had also for the first time made its appearance at Portage la Prairie, on the Assiniboine.

89. **Pediocætes phasianellus columbianus.** COLUMBIAN SHARP-TAILED GROUSE. PRAIRIE CHICKEN.—Very abundant resident all over. North to the narrows of Lake Winnipeg, and thence eastward as far as Long Lake and Pic River, on Lake Winnipeg (*Bell*). This species lives exclusively on the open prairie in the summer, and exclusively in the wooded districts in the winter, so that it is in a sense migratory.

90. **Ectopistes migratorius.** PASSENGER PIGEON.—Common summer resident, probably all over, as it was noted on Riding Mountain, along the Assiniboine, on Big Plain, on Turtle Mountain (*Coues*), and northward, as well as all over the Red River Valley. Thoughout the Winnipegoosis region. Often very abundant during the migrations. I am not aware of the existence of any extensive "rookeries." Arrives early in May; departs in October.

91. **Zenaidura macroura.** MOURNING DOVE.—"Common in Pembina in June" (*Coues*). Rare at Winnipeg.

92. **Cathartes aura.** TURKEY VULTURE.—Common summer resident in the Assiniboine Valley only. One specimen taken on Red River (*Blakiston*). The present species, the Missouri Skylark, and others, appear to confine themselves to the Assiniboine region as defined; while the Bluebird, the Woodcock, and others are as characteristic of the Red River Valley.

93. **Circus hudsonius.** HARRIER.—Abundant summer resident all over. The adults in blue plumage are common in spring and fall. Arrives April 15; departs October 15.

94. **Accipiter velox.** SHARP-SHINNED HAWK.— Common summer resident of Red River Valley. Taken on the Souris (*Coues*). Rather rare on the Big Plain. Arrives April 15; departs October 15.

95. **Accipiter atricapillus.** AMERICAN GOSHAWK.— Tolerably common fall and winter visitant on the Big Plain and about Winnipeg. Not noted during the breeding season; usually appearing in August.

96. **Buteo borealis.** RED-TAILED HAWK.— Tolerably common summer resident of the wooded regions all over. Apparently complementary of the next, which is found in more open country and on the prairie. Arrives April 15; departs October 15. None that I took appeared to be referable to the form *krideri*.

97. **Buteo swainsoni.** SWAINSON'S HAWK. COMMON HENHAWK.— Very abundant summer resident all over; breeds perhaps twice each season. Have seen two black specimens. Arrives April 15; departs October 15.

98. **Buteo latissimus.** BROAD-WINGED HAWK.— Very rare summer visitant on the Big Plain. More common and probably breeding in Red River Valley.

99. **Archibuteo lagopus sancti-johannis.** AMERICAN ROUGH-LEGGED HAWK.— Tolerably common fall visitant on the Big Plain and about Winnipeg. Less common in the spring.

100. **Archibuteo ferrugineus.** FERRUGINEUS ROUGH-LEG.— This species is doubtless Manitoban, as Dr. Coues found it breeding on the Pembina Mountain, and I have seen a specimen taken immediately to the west of the Province.

101. **Aquila chrysaëtus.** GOLDEN EAGLE.— Very rare, but apparently resident on Big Plain and along Red River.

102. **Haliaëtus leucocephalus.** BALD EAGLE.— Very rare summer visitant on Big Plain and on Red River, probably breeding.

103. **Falco peregrinus anatum.** DUCK HAWK.— Much like the Goshawk in movements and distribution. Probably breeds in the neighborhood of the large lakes. Quite common on the Big Plain, about August.

104. **Falco columbarius.** PIGEON HAWK.— Common fall migrant on Big Plain, Riding Mountain, and in Red River Valley. Norway House.

105. **Falco richardsonii.** RICHARDSON'S MERLIN.— Probably Manitoban. Taken by Dr. Coues on the boundary at the headwaters of the Souris.

106. **Falco sparverius.** AMERICAN SPARROW HAWK.— Abundant summer resident all over. Throughout the Winnipegoosis region. Arrives April 20; departs late in September.

107. **Pandion haliaëtus carolinensis.** AMERICAN OSPREY.— FISH HAWK. Not yet taken in Manitoba, though it doubtless occurs, as it is given, "Common around Lake Superior and at Churchill River" (*Bell*). Occasional at Qu'Appelle. North to Barren Grounds (*Richardson*). These with other records surround without actually touching our Province.

108. **Asio wilsonianus.** AMERICAN LONG-EARED OWL.— Common summer resident on the Big Plain and in the Red River Valley. Probably all over, as it is found north to the Saskatchewan (*Richardson*). Arrives April 15; departs October 20.

109. **Asio accipitrinus.** SHORT-EARED OWL. MARSH OWL.—Common summer resident on Big Plain and in Red River Valley. Arrives April 1; departs October 30.

110. **Syrnium nebulosum.** BARRED OWL.—Tolerably common summer resident about Winnipeg and northward in Red River Valley, arriving April 1, departing November 1.

111. **Ulula cinerea.** GREAT GRAY OWL.—One specimen taken on the Big Plain, September 29, 1884. Rather common along the Red River, and resident in the woods about Lake Winnipeg.

112. **Nyctala tengmalmi richardsoni.** RICHARDSON'S OWL.—Rare on Big Plain. Tolerably common resident along Red River.

113. **Nyctala acadica.** SAW-WHET OWL.—Rare resident. Noted only on Red River.

114. **Bubo virginianus subarcticus.** WESTERN HORNED OWL.—Common resident all over. This form of *Bubo* is lighter in color than the true *B. v. subarcticus*. It is probably just intermediate between that form and var. *arcticus*.

114 *a*. **Bubo virginianus arcticus.** ARCTIC HORNED OWL.—One shot near Duck Mountain in the fall of 1883. Touchwood Hills, October, 1880 (*Macoun*).

115. **Nyctea nyctea.** SNOWY OWL. WHITE OWL.—Common winter visitant, probably all over, as it is reported from all points where observations have been made in winter; this excludes only the Souris Plains. Rare summer resident near Lake Winnipeg (*Gunn*). Arrives October 1; departs April 15.

116. **Surnia ulula caparoch.** AMERICAN HAWK OWL.—Tolerably common winter visitant on the Big Plain and in the Red River Valley. Exceedingly abundant in the winter of 1884–85. Arrives late in September and remains until April.

117. **Coccyzus erythrophthalmus.** BLACK-BILLED CUCKOO.—A tolerably common summer resident, probably all over, as it was noted at Riding Mountain, Big Plain, and in the Red River region. First seen at Carberry usually late in June, but given by Mr. Nash as arriving at Portage la Prairie late in May. Departs early in the fall.

118. **Ceryle alcyon.** BELTED KINGFISHER.—Common summer resident all over. Very abundant on Red Deer and Swan Rivers. Lake Winnipeg (*Bell*). Arrives April 20; departs in October.

119. **Dryobates villosus leucomelas.** NORTHERN HAIRY WOODPECKER.—Common resident all over. Found throughout the Winnipegoosis region.

120. **Dryobates pubescens.** DOWNY WOODPECKER.—Common resident about Winnipeg, the Big Plain, Lake Manitoba and westward.

121. **Picoides arcticus.** ARCTIC THREE-TOED WOODPECKER.—Abun-

dant resident in the wooded parts about the Big Plain and in the Red River Valley. Red Deer River. Most plentiful in winter, therefore probably in some degree migratory.

122. **Picoides americanus**. AMERICAN THREE-TOED WOODPECKER.—Not taken, but Richardson ascribes to it a range which includes Northern Manitoba.

123. **Sphyrapicus varius**. YELLOW-BELLIED SAPSUCKER.—Common summer resident about the Big Plain, on the Souris (*Coues*), and in the Red River Valley. Manitoba House and Swan Lake House.

124. **Ceophlœus pileatus**. PILEATED WOODPECKER. COCK-OF-THE WOODS.—Rare resident in heavy timber. Occurs at Lake Winnipeg and Lake of the Woods (*Hine*). Selkirk (*Gunn*). At Swan River. Probably in all the great forests to the north, as it is found north to latitude 63° (*Richardson*).

125. **Melanerpes erythrocephalus**. RED-HEADED WOODPECKER.—A tolerably common summer resident about the Big Plain, and also along the Red River. It is probably a summer resident in all wooded sections.

126. **Colaptes auratus**. FLICKER. HIGHHOLDER.—Very abundant summer resident all over. Red Deer Lake. Arrives April 15; departs September 30.

127. **Antrostomus vociferus**. WHIP-POOR-WILL.—Abundant summer resident at Big Plain, Turtle Mountain, and in Red River Valley. Manitoba House. Arrives May 20; departs September 15.

128. **Chordeiles virginianus henryi**. WESTERN NIGHT-HAWK.—Very abundant summer resident all over. Manitoba House. Arrives May 24; departs August 30.

129. **Chætura pelagica**. CHIMNEY SWIFT.—Tolerably common summer resident all over. "A few observed at Swan Lake House."

(*To be concluded.*)

NOTES ON BIRDS OF THE SALT POND MOUNTAIN, VIRGINIA.

BY WILLIAM C. RIVES, JR., M. D.

IT has been well established by numerous observations that, as far as birds are concerned, the northern and southern limits of the various faunæ correspond far more closely with isothermal lines than with parallels of latitude.

In his very interesting paper on the Summer Birds of the Catskills,* Mr. Eugene P. Bicknell, after referring to an article by Professor Cope tending to prove that in accordance with the above-mentioned law the fauna of the southern Alleghanies possesses marked Canadian characteristics, calls attention to the fact that the Snowbird (*Junco hyemalis*) is the only species really typical of the Canadian fauna which has actually been ascertained to breed with regularity south of Pennsylvania.

During a short visit to the Salt Pond Mountain, in Giles County, Virginia, on June 4, 1885, and a few subsequent days, one or two additional species were seen by the writer, which, from the circumstance of its being the breeding season, would seem to show that they rear their young in this locality, and though the observations made were necessarily incomplete from want of time, some account of the birds met with during the few days spent at this little known locality may be of sufficient interest to be recorded.

The Salt Pond Mountain, one of the loftiest in Southwest Virginia, attains the height of 4500 feet,—the highest in the State, White Top Mountain, near the North Carolina line, reaching the altitude of 5530. It derives its name from the Salt Pond, now more appropriately called Mountain Lake, a beautiful sheet of fresh water enclosed between the summit of the mountain and its spurs, and lying at the great elevation of 4000 feet. The lake has for many years been a summer resort, but since the building of the New River Railway has become much easier of access, as it is but nine miles distant from Staytide, a station upon the west bank of the New River, opposite Eggleston's Sulphur Springs. The Salt Pond Mountain has long been known to botanists as possessing a very interesting flora, and has been visited by Professor Asa Gray and others of eminence in the science. It is one of the few places in which the rare plant *Sedum nevii*—originally discovered in Alabama—has been found. The flora of this region in general, which comprises as might be expected many northern species, has been carefully investigated by Howard Shriver, Esq., of Wytheville, Va., whose writings should be consulted by those interested in this subject.

* Transactions of the Linnæan Society of New York, Vol. I, 1882.

On the occasion of my visit the mountain was reached by a drive of twenty-four miles from Christiansburg, on the Norfolk and Western Railway, passing through Blacksburg, the seat of the Virginia Agricultural and Mechanical College, situated in a beautiful and fertile valley, and over the Brush and Gap Mountains. The Salt Pond Mountain is visible for a great distance, but its massive proportions are particularly well seen from the northern slopes of the Gap Mountain, above the village of Newport. It presents, like many of the Virginian ranges, a long level top, which is slightly interrupted by the rounded eminence of Bald Knob, its highest peak, and at its western end falls away rather abruptly towards the valley of the New River. After leaving Newport and fording Sinking Creek, the ascent began. Proceeding upwards, a number of Bewick's Wrens (*Thryothorus bewickii*), with young already quite well grown, were found along the fences and among piles of brush in one of the clearings. Their movements were restless and active, like those of other Wrens, and their long tails were especially conspicuous. During the rest of the ascent but few if any birds were noticed. The road, which was very rough in places, at a point about two-thirds up the mountain turns completely round its western shoulder, here affording a magnificent and extensive view of distant ranges to the south and west, and of the New River Valley, and is carried along the side of a deep ravine, lying between this portion of the mountain and one of its outlying spurs.

Just beyond the summit of the ridge which terminates this valley, lies the lake, fringed in the greater part of its extent with rhododendrons (*Rhododendron maximum*), which when in flower in July must present a beautiful sight, and form an exquisite setting for this mountain gem. As it now exists, the lake is of comparatively recent origin, and is thought to have been formed by the accidental stoppage of some of the outlets of the stream, or small pond, which existed in this spot in the last century. Its greatest depth, according to Professor William B. Rogers, is from 56 to 60 feet. It is three-quarters of a mile long by half a mile wide, and at its northern end discharges its waters by a brook, which after a short course enters Little Stony Creek, a beautiful and picturesque stream, abounding in trout, which, in the course of its rapid descent to the New River, forms a fine

waterfall about seventy feet in height. Singularly enough, fish do not thrive in the lake itself.

At this lofty elevation the air is cool and bracing, and the numerous pleasant walks over the mountain crests offer many attractions. The condition of the vegetation showed a marked contrast with that of the lower country, which was in a much more advanced state, and the oaks still retained the silvery gray appearance which they present before the leaves are fully developed. The mountain is for the most part thickly wooded with various kinds of trees, but wherever there is a clearing the grass grows readily. The buckeye and the sugar maple — here known as the sugar tree — flourish, and in many of the ravines and sheltered spots are brakes of rhododendrons and dark and lofty hemlock spruces.

Among the plants observed were fine specimens of *Trillium grandiflorum*, with large rose-colored petals, the deep purple *Trillium erectum*—a characteristic northern species—*Cypripedium acaule*, *Cypripedium pubescens*, *Cypripedium parviflorum*, *Arisæma triphyllum*, *Pedicularis canadensis*, *Geranium maculatum*, *Sedum turnatum*, and *Houstonia cærulea*. The lily of the valley (*Convallaria majalis*) was in flower and moderately abundant, the laurel (*Kalmia latifolia*) was common, and in many places the woods were resplendent with the gorgeous blossoms of the beautiful flame-colored azalea (*Azalea calendulacea*). In the neighborhood of the lake and in the moist and shady woods the cinnamon fern (*Osmunda cinnamomes*) grew in abundance, while in many places the ground was covered with a dense growth of Clayton's fern (*Osmunda claytoniana*). Among other ferns met with were *Aspidium acrostichoides*, *Pteris aquilina*, and *Adiantum pedatum*.

The bird life did not appear to be very abundant. The Robin, however, was tolerably plentiful, and I noticed a nest doubtless constructed by this species, but which I did not examine. The Common Yellowbird (*Spinus tristis*) was seen in open ground near the lake, and in the woods the notes of the Oven-bird *Seiurus aurocapillus*) were frequently to be heard. The thick growth of oak and other bushes on the summit of Bald Knob afforded excellent shelter for ground birds, but appeared to be monopolized chiefly by the Towhee Bunting (*Pipilo erythrophthalmus*), whose notes were heard more frequently than the birds

themselves were seen. I observed a Turkey Buzzard (*Cathartes aura*) sailing about at the top of Bald Knob, and was afterwards informed that the nest had been discovered a short time previously, in a somewhat inaccessible position in one of the crevices among the rocks at the summit, but I did not secure an opportunity of seeing it. The Wood Thrush (*Turdus mustelinus*) frequented the mountain, as well as the Least Flycatcher (*Empidonax minimus*), which is not found in Tidewater and Middle Virginia in the breeding season, but was here noticed and heard uttering its usual *chebec*. The note of a Pewee (*Sayornis phœbe*) was also heard. The common Golden-winged Woodpecker (*Colaptes auratus*) was encountered, and a pair of Hairy Woodpeckers (*Dryobates villosus*) was observed at a high elevation, and from their excited notes and actions I inferred that they probably had young. A single specimen of the Green Heron (*Ardea virescens*) was seen at the outlet of the lake. A Catbird (*Galeoscoptes carolinensis*) was found June 6 sitting upon its nest, which contained four eggs, and was built in a rhododendron on the bank of Little Stony Creek.

It was of especial interest to meet with birds of the Canadian fauna. Of the Snowbird (*Junco hyemalis*) I saw in all about half a dozen individuals, the males in beautiful spring plumage. One pair was evidently mated and kept uttering their sharp alarm note *chick*, but though I searched for the nest for some time I was unable to find it. The fact of their breeding in this vicinity is not new.* The Black-throated Blue Warbler (*Dendroica cærulescens*) seemed to be not uncommon, and their hoarse *b-z-z-z-e-e* was often heard proceeding from the depths of the rhododendron thickets. Several Chestnut-sided Warblers (*Dendroica pennsylvanica*) were noticed, though they did not appear to be abundant. The Canada Warbler (*Myiodioctes canadensis*) was met with several times; one of them by its actions led me to suspect that it might have a nest, but in this case I was also unsuccessful in finding one. I saw, I believe, a pair of Blue Yellow-backed Warblers (*Compsothlypis americana*), but was not certain of their identification, and also one or two shy Thrushes whose species I did not determine. None of the other *Dendroicæ* were identified during my short stay, and the very characteristic note of the Black-poll (*Dendroica striata*) was

* See Avifauna Columbiana, pp. 63 and 97.

not heard, although it could hardly have escaped my observation had that bird been at all common.

The Snowbirds and the Warblers I have mentioned were not observed below the level of about 3000 feet.

In the country between the Salt Pond Mountain and Christiansburg, which has an average elevation of 2000 feet, were found the Wood Thrush, Towhee Bunting, Indigo Bird, Kingbird, Bay-Winged Sparrow, Catbird, Baltimore Oriole, Red-winged Blackbird, Common Dove, Crow, Purple Grackle, Yellow Warbler, Purple Martin, and Night Hawk, or Bull Bat, as it is called in the South. A single Red-headed Woodpecker (*Melanerpes erythrocephalus*) was seen, and the now ubiquitous English Sparrow has penetrated into even this comparatively remote part of the State. A small colony of Cliff Swallows (*Petrochelidon lunifrons*) had attached their nests to the shed of a stable at Blacksburg. The Quail (*Colinus virginianus*) was said to be abundant.

The species here recorded must form of course, but a very insignificant proportion of the birds of this region. The recent investigations of Mr. William Brewster in Western North Carolina will doubtless prove to have been of much importance and interest, and greatly increase our knowledge of the birds of the mountain districts of the South.

FIELD NOTES ON THE BIRDS OF WASHINGTON COUNTY, OREGON.

BY A. W. ANTHONY.

WASHINGTON COUNTY, Oregon, lies in the northwestern part of the State, about thirty miles from the coast, and ten miles southwest of the Columbia River, at its nearest point—far enough away to catch but comparatively few of its many sea birds. The Willamette River, about eight miles to the east, is a great resort for nearly all of the species of Ducks known to the State. These, however, are seldom seen in the eastern half of the county, except as they fly over to and from their feeding grounds, owing

to this part of the region being covered by a very dense growth of fir and pine, and lacking suitable bodies of water. The western half of the county, however, is more open, and has a few streams and ponds. The only body of water of any size is Wapita Lake, a large, shallow marsh, which is dry during the summer months. Here water birds fairly swarm during the fall, winter, and spring, and a few were found nesting along the stream that drains the lake.

The coast mountains, which border this region on the west, doubtless contain many species not to be found elsewhere in the county, but unfortunately I was unable to visit this locality.

My observations extended from February, 1884, to June, 1885, and were made mostly in the vicinity of Beaverton, in the eastern part of the county. Two days were spent in the central part, at Wapita Lake, early in November, but as the water birds had hardly begun to arrive, the list is necessarily very incomplete. A few birds, such as *Olor americanus*, *O. buccinator*, and *Bernicla nigrescens* are found in large numbers on the Columbia River, but are only seen in Washington County as they fly over during migrations, and are found on rare occasions on Wapita Lake. Other species, as *Pandion haliaëtus carolinensis*, *Grus mexicana*, and *Grus americana* were more or less common in other parts of the State, but were only seen in the county as they flew over in spring and fall, none being known to stop.

Altnough the winters are usually very mild, with very little if any snow, on December 11, 1884, a very heavy snow storm set in, accompanied by high wind from the northwest, lasting for nearly three weeks, with hardly an intermission. Such a storm was something unheard of in this part of the State, and it had the effect of driving a great many of our winter birds south, and doubtless other species that would have wintered with us were driven past unnoticed. After the storm, large numbers of *Sturnella magna neglecta*, and *Oreortyx pictus* were found dead, either frozen or starved. *Regulus calendula*, *R. olivaceus*, *Thryothorus bewickii spilurus*, and *Troglodytes hiemalis pacificus*, were not to be found at all after the storm, nor were they noticed in any number during the spring migration, they having chosen other routes north.

The list with the exception of a few species which were positively identified—one or two species of Hawks and Ducks

only—is given on the strength of my having taken specimens, or seen the birds within the limits of the region under circumstances that left but little if any doubt as to their identity. The list is necessarily incomplete in many respects, as almost the entire western half of the county was left unexplored, and other regions of importance were neglected owing to lack of time. The region about Beaverton, however, was thoroughly worked over, and I am satisfied that but few of the more common species escaped me. Several species of Grebes, Gulls, and Shore Birds were described to me by the sportsmen of Wapita Lake as being found later in the season; but as I was unable to visit that locality at the proper time, many interesting species were missed, and the list of shore and water birds is thus left very incomplete. The nomenclature and classification is that of the new A. O. U. Check List.

1. **Colymbus nigricollis.** AMERICAN EARED GREBE.—Common at Wapita Lake.

2. **Merganser americanus.** AMERICAN MERGANSER.—A few seen in December.

3. **Merganser serrator.** RED-BREASTED MERGANSER.—Not uncommon in winter.

4. **Lophodytes cucullatus.** HOODED MERGANSER.—Quite plenty at Wapita Lake in winter; a few seen at Beaverton in December.

5. **Anas boschas.** MALLARD.—Abundant winter resident; a few breed.

6. **Anas strepera.** GADWALL.—Not uncommon during migrations.

7. **Anas carolinensis.** GREEN-WINGED TEAL.—Abundant in winter; a few breed.

8. **Dafila acuta.** PINTAIL.—Abundant in fall and winter.

9. **Aix sponsa.** WOOD DUCK.—Common resident.

10. **Aythya affinis.** LESSER SCAUP DUCK.—Quite common at Wapita in October.

Another species of Duck was seen, probably *A. collaris*, but it was not taken. It is known to the sportsmen as 'River Canvasback.'

11. **Branta canadensis.** CANADA GOOSE.—Abundant winter resident.

12. **Branta canadensis hutchinsi.** HUTCHINS'S GOOSE.—The most abundant of our Geese. The farmers in the western part of the county told me that hundreds of bushels of wheat are destroyed annually by this and the foregoing species.

13. **Branta nigricans.** BLACK BRANT.—Occasionally seen flying over in spring and fall.

14. **Olor columbianus.** WHISTLING SWAN.—Rare in the county. Both *O. columbianus* and *O. buccinator* are common on the Columbia River during the winter. *O. columbianus* is occasionally found on Wapita Lake, but I could get no evidence in regard to the presence there of *O. buccinator*.

15. **Ardea herodias.** GREAT BLUE HERON.—Rare; occasionally seen in summer; one shot in December.

16. **Ægialitis vocifera.** KILLDEER.—Common in the western part of the county; only one or two noted at Beaverton.

17. **Gallinago delicata.** WILSON'S SNIPE.—Very abundant in the western part of the county in spring and fall; a few winter at Beaverton.

18. **Grus mexicana.** SANDHILL CRANE.—Very common fall migrant; seen but once in spring.

19. **Grus americana.** WHOOPING CRANE.—Rare; seen once or twice in fall, flying over in company with the preceding.

20. **Rallus virginianus.** VIRGINIA RAIL.—A few were seen in a collection in Portland, and I was told that they were common at Wapita Lake during summer.

21. **Fulica americana.** AMERICAN COOT.—Abundant at Wapita during migrations; a few breed.

22. **Colinus virginianus.** BOB-WHITE.—Rare. They were introduced some time since, but are still confined to a few favored localities.

23. **Oreortyx pictus.** MOUNTAIN PARTRIDGE.—Abundant. This little beauty was seen everywhere up to December last, when the big storm left hardly enough to perpetuate the species. The plume is noticeable in the chick just from the egg, in the form of a little tuft of down.

24. **Dendragopus obscurus fuliginosus.** SOOTY GROUSE.—Abundant resident. During the winter it stays high up in the firs and is very seldom noticed. At the first indication of spring the males begin to 'hoot.' This is not dissimilar to the 'booming' of the Prairie Hen. While uttering his love notes the bird may usually be seen about fifty to seventy-five feet from the ground, in a thick fir, his tail spread. wings drooping, and the air-sacks on either side of the neck filled to their utmost capacity. The note is deep and resonant, and although not loud can be heard for some distance. It is usually repeated from five to seven times, the first being loudest, gradually decreasing in energy to the last. This Grouse is an accomplished ventriloquist; I have often looked for half an hour for one supposed to be fifty yards in front of me, to find it as far in the rear. Nests found in May contained from five to seven eggs.

25. **Bonasa umbellus sabini.** OREGON RUFFED GROUSE.—Abundant. Has all the habits of the eastern Ruffed Grouse, but is far richer in plumage.

26. **Columba fasciata.** BAND-TAILED PIGEON.—Common summer resident. South of Beaverton is a large spring, the waters of which contain some mineral which has great attraction for these Pigeons, and here they are always to be found in large numbers.

27. **Zenaidura macroura.** MOURNING DOVE.—Common during summer.

28. **Cathartes aura.** TURKEY BUZZARD.—Not uncommon in summer.

29. **Accipiter velox.** SHARP-SHINNED HAWK. — A not uncommon resident.

30 **Buteo borealis calurus.** WESTERN REDTAIL.—Common resident. Very shy and hard to approach.

31. **Haliaëtus leucocephalus.** BALD EAGLE.—Rare. Two seen in December.

32. **Falco columbarius.** PIGEON HAWK.—Apparently rare; only one or two seen.

33. **Falco sparverius.** SPARROW HAWK.—Abundant summer resident.

34. **Pandion haliaetus carolinensis.** OSPREY.—Rare in the county; one or two seen flying over Beaverton in May.

35. **Ulula cinerea.** GREAT GRAY OWL.—Very rare. A very large Owl was described to me which I think was this species.

36. **Nyctala acadica.** SAW-WHET OWL.—Rare. One seen in July; occasionally heard in April.

37. **Megascops asio kennicottii.** KENNICOTT'S SCREECH OWL.—A not uncommon resident. One was caught in a steel-trap set in a deep narrow ditch. As the trap was sunk at least four inches under the water, and was not baited, it is a puzzle to me how the bird was caught.

38. **Bubo viginianus subarcticus.** WESTERN HORNED OWL.—Resident; but more common in winter. I am satisfied that var. *saturatior* is found with us in winter, but whether in summer, I am not able to say.

39. **Glaucidium gnoma.** PYGMY OWL.—Common resident. Often seen flying about in the bright sunlight, apparently seeing as well at that time as at night.

40. **Dryobates villosus harrisi.** HARRIS'S WOODPECKER.—Very common resident.

41. **Dryobates pubescens.** DOWNY WOODPECKER.—Not so common as the preceding.

42. **Dryobates pubescens gairdneri.** GAIRDNER'S WOODPECKER.—Seems to be very rare; only one or two seen.

43. **Sphyrapicus ruber.** RED-BREASTED SAPSUCKER.—Common resident. Seems to prefer the orchards to the forests, although often seen in the maples. A pair were seen excavating for a nest April 10, but as it was in a very large stub, and fifty feet from the ground, they were allowed to raise their brood in peace.

44. **Ceophlœus pileatus.** PILEATED WOODPECKER. 'Wood-cock' of the natives.—Found everywhere where the timber is thick and heavy. I have often walked up to within fifteen feet of one of these Woodpeckers and watched him for some time before he took fright.

45. **Melanerpes torquatus.** LEWIS'S WOODPECKER.—Common resident. Seems to have quite an attachment for certain localities, commonly oak timber, where the same birds are always to be found.

46. **Colaptes cafer.** RED-SHAFTED FLICKER.—Abundant resident. Since the new subspecies *saturatior* was assigned to this district by Mr. Ridgway, I am at a loss to know just what disposal to make of this bird.

47. **Chordeiles virginianus henryi.** WESTERN NIGHTHAWK.—Abundant during summer. Nests in openings in the timber.

48. **Chætura vauxi.** VAUX'S SWIFT.—Common summer resident. Hunts in flocks of fifteen or twenty. A pair were found nesting in a

very large stub late in May. The nest, however, was inaccessible. The birds would circle about fully two hundred feet above the stub until directly over the opening, then darting down like a flash would disappear with a sharp twitter.

49. **Trochilus rufus.** RUFOUS-BACKED HUMMINGBIRD. — Abundant. Breeds nearly everywhere. Nests were found in ferns, in bushes, trees, and the vines overhanging old embankments. The latter seems to be the most favored locality, six nests being found in an old railroad cut, in May and June. In July they all disappear.

50. **Tyrannus vociferans.** CASSIN'S KINGBIRD.—Rare. A few were seen in May, 1885.

51. **Contopus borealis.** OLIVE-SIDED FLYCATCHER. — Common in spring; a few breed. Often seen perched on the top of the tallest firs, two hundred feet from the ground.

52. **Contopus richardsoni.** WESTERN WOOD PEWEE.— Very common summer resident. It seems to prefer a less elevated perch than the preceding, and is often seen to descend almost to the ground to snap up a passing insect. The nest is saddled upon the limb, generally well out from the body of the tree on a horizontal branch, and usually quite well up in a deciduous tree, often an alder.

53. **Empidonax pusillus.** LITTLE FLYCATCHER — The most common of our Flycatchers. It is not distinguished from the preceding by the inhabitants, both being called 'Peach-brigade,' from the note of *C. richardsoni*. *E. pusillus* seems to prefer even a less elevated perch than *C. richardsoni*, and is oftener seen perched on the weed and grass stems than elsewhere. Nests found in July were in the forks of the tall rank ferns, generally about a foot or eighteen inches from the ground.

54. **Otocoris alpestris leucolæma.** PALLID HORNED LARK.—Not uncommon in winter, in company with *Anthus pensilvanicus*.

55. **Otocoris alpestris strigata.** STREAKED HORNED LARK.— A rather common summer resident. A nest found May 21 was built in a hole about three inches below the surface of the ground. It was composed of dry grasses and fine roots, lined with fine dry roots and a few horse hairs. It contained three fresh eggs. The bird was flushed from the eggs after dark, and I suppose must have been unable to find her way back, for although I watched the nest for several days she was not seen to go near it again.

56. **Corvus corax sinuatus.** AMERICAN RAVEN. Not uncommon resident. Often seen flying over at Beaverton.

57. **Corvus americanus.** AMERICAN CROW.—Not common. A few are seen at intervals throughout the year.

58. **Corvus carnivorus.** NORTHWEST CROW.—Rare; a few were seen at Beaverton that had wandered from the Willamette River.

59. **Pica pica hudsonica.** AMERICAN MAGPIE.—Rare resident. A few are found in favored localities.

60. **Cyanocitta stelleri.** STELLER'S JAY.—A very common resident. The same noisy, knowing fellow that is found everywhere in the West. The

nest is a very bulky affair, built of large sticks and twigs, with a good supply of mud, and lined with fine, dry grass. One found in April was eight feet up in a small fir. It contained four bright blue eggs, with a few light brown spots on the large end.

61. **Aphelocoma californica.** CALIFORNIA JAY.—Rare. A few were seen at Beaverton in October. It seems to be more common in the western part of the county.

62. **Perisoreus obscurus.** OREGON JAY.—Common winter resident. Fearless is an appropriate term to use in relation to this bird; it seems utterly devoid of fear. While dressing deer in the thick timber I have been almost covered with Jays flying down from the neighboring trees. They would settle on my back, head, or shoulders, tugging and pulling at each loose shred of my coat until one would think that their only object was to help me in all ways possible. At such times their only note is a low, plaintive cry.

In March they depart for the mountains to breed, although a few sometimes stay and breed in the more secluded parts of the county. On March 31, 1884, I took a nest and set of five eggs, which I think are the first discovered. The nest was placed about eighty-five feet from the ground in a fir, very well concealed. It was built close against the trunk, and was composed of sticks, twigs, and moss, rather loosely put together, and lined with cow hair, a few bunches of wool, and one or two feathers of *Bonasa*. It measured: Inside diameter, 3.12 inches; depth, 2.85 inches; outside diameter, 1.75 inches; depth, 5 inches. The eggs were five, very light blue, with a grayish cast, thickly covered with spots of brown and lilac, collected chiefly on the larger end. In one specimen were a few black hair-like lines over the large end. They are now in the United States National Museum. The breeding of this Jay here is a departure from its usual habits, I think.

63. **Agelaius phœniceus.** RED-WINGED BLACKBIRD.—Not common at Beaverton. This and the two following species are rather rare in the eastern part of the county, but were very abundant in the tules about Wapita Lake.

64. **Agelaius gubernator.** BICOLORED BLACKBIRD.—A few seen at Beaverton. Abundant throughout the western part of the county.

65. **Agelaius tricolor.** TRICOLORED BLACKBIRD.—The same remarks apply to this as to the preceding.

66. **Sturnella magna neglecta.** WESTERN MEADOW LARK.—Common. Hundreds were snowed under in the blizzard last winter, and were afterwards found dead, in little companies of six or eight.

67. **Scolecophagus cyanocephalus.** BREWER'S BLACKBIRD.—Abundant summer resident. A few are seen throughout the winter; breeds in the deep grass and weeds along the ditch banks. In the fall of 1884 a pair of partial albinos were shot in company. They were alone, rather an unusual occurrence at this season, and the only Blackbirds seen for some time. During the spring of 1885, while this species was migrating, albinos were very plenty. At one time two were seen in a flock of a

dozen, one much spotted with white, the other with two or three white feathers in the centre of the tail. Again, in a flock of fifteen, four of these abnormal plumaged birds were found, ranging from one with a few white blotches on the breast and back, to one nearly half white. Another was seen with two broad white bars on each wing; another with white feathers in each side of the tail, like a Junco; while another had a white spot on the back and a white ring around each eye, giving it a very wise and Owl-like expression. I think it would be difficult to shoot one hundred specimens of *Scolecophagus* at random during the spring migration without finding one or more with white markings. It is worthy of note, however, that all of these birds disappeared before the beginning of the breeding season.

68. **Coccothraustes vespertina.** EVENING GROSBEAK.—Very common in winter. In Portland I saw mounted specimens, and was told that they were a native of Japan, having been imported to this country some time ago. Upon inquiry I found that the story was well circulated and generally believed; however, some assured me that the bird was brought from Australia and not from Japan. During the winter *C. vespertina* is common everywhere, but as it keeps well in the tops of the pines and firs, it is not usually noticed. In Portland, however, their habits differ, large flocks being seen feeding in the maples and picking up the fallen seeds at the very feet of the passing crowd. I am satisfied that several pairs bred near Beaverton this spring, but I was unable to find the exact locality.

69. **Carpodacus purpureus californicus.** CALIFORNIA PURPLE FINCH.—Abundant until December; appears again the last of January.

70. **Loxia curvirostra minor.** RED CROSSBILL.—Rare during migrations; more common in the coast mountains and in the western part of the county.

71. **Loxia leucoptera.** WHITE-WINGED CROSSBILL.—Very rare; two or three seen during the storm of December last.

72. **Spinus tristis.** AMERICAN GOLDFINCH.—Abundant summer resident. In the fall flocks of thousands were seen feeding on the seeds of the thistle.

73. **Spinus pinus.** PINE FINCH.—Common during migrations; flying about in noisy, restless flocks, often in company with the preceding.

74. **Passerculus sandwichensis alaudinus.** WESTERN SAVANNA SPARROW.—Rare. Found only during migrations.

75. **Poocætes gramineus confinis.** WESTERN VESPER SPARROW. 'Ground Bird,' 'Gray Bird,' of the natives.—Abundant summer resident, found everywhere in the open country.

76. **Zonotrichia gambeli.** GAMBEL'S WHITE-CROWNED SPARROW.—Abundant summer resident. Arrives in full song, and is heard almost constantly during the breeding season, often after dark. After the first brood leaves the nest the White-crowns disappear from about Beaverton, and become more common on the hills and higher lands, where a second, and often a third, brood is raised.

77. **Zonotrichia coronata.** GOLDEN-CROWNED SPARROW.—Rather common during migrations; stopping only for a few days. Very shy and

silent during their stay. Arrives nearly or quite two weeks later than the preceding.

78. **Spizella socialis arizonæ.** ARIZONA CHIPPING SPARROW.—Common summer resident. Song and habits almost identical with those of the eastern bird.

79. **Junco hyemalis oregonus.** OREGON JUNCO.—Abundant throughout the year. Breeds everywhere, raising three and often four broods. In March, 1884, an almost pure albino was seen near Beaverton. He escaped me, however, and although he stayed in that locality until June, I was unable to secure him. In May, 1885, however, I saw him from a passing railway train, and on my return next day, with a gun, he was easily secured, and proved to be a male that had evidently raised a brood in the vicinity. His mate was in normal plumage, and several young birds seen near by, and supposed to be his family, were also normal. A very careful examination and dissection of the male failed to discover anything wrong with his health, and no 'tape worms'* could be found. Upon inquiry among the farmers in the vicinity I found that the bird was well known to them, and that it had been seen for at least two seasons before it came under my notice. They told me that it had always nested in the same place—a clay bank covered by a few low bushes. Here it was always to be found until about the last of June, when it disappeared, and would not be seen again until the following spring. The eggs of this species vary greatly, some being very heavily marked, while others are almost spotless.

80. **Melospiza fasciata guttata.** RUSTY SONG SPARROW.—Very common resident, though less abundant in winter. A nest of this species, taken in May, contained three eggs of *Melospiza* and one of *Pipilo maculatus oregonus.*

81. **Melospiza fasciata rufina.** SOOTY SONG SPARROW.—Not common; a few seen in winter.

82. **Passerella iliaca unalashkensis.** TOWNSEND'S SPARROW.—Not common; a few are seen in spring and fall, and occasionally during winter. Very shy, keeping in the tangled thickets of rose bushes. Specimens taken in Southwestern Oregon are of a darker and more sooty cast than any I have seen from other localities.

83. **Pipilo maculatus oregonus.** OREGON TOWHEE.—Common resident; rather rare in same locality in winter. Nests in old brush piles and very dense thickets. An egg was found in a nest of *Melospiza guttata.*

84. **Passerina amœna.** LAZULI FINCH.—Not common. Seen in spring and fall; rarely in summer.

85. **Piranga ludoviciana.** WESTERN TANAGER.—Common summer resident. Frequents the deepest evergreen forests, but it is often found in the deciduous growth. Its song is indistinguishable from that of the Scarlet Tanager (*P. erythromelas*).

86. **Progne subis.** PURPLE MARTIN.—One seen in May.

87. **Petrochelidon lunifrons.** CLIFF SWALLOW.—Abundant summer

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* See Auk, Vol. II, No. I, p. 113.

resident. A colony of about two hundred built at Beaverton this spring, for the first time in the memory of its inhabitants.

88. **Hirundo erythrogaster.** BARN SWALLOW.—Rather rare; seen for a few days only in spring and fall.

89. **Tachycineta bicolor.** WHITE-BELLIED SWALLOW. — Abundant summer resident. Builds in hollow stubs and Woodpecker holes.

90. **Tachycineta thalassina.** VIOLET-GREEN SWALLOW.—Very common migrant. A few stay to breed, nesting in colonies in hollow stubs.

91. **Ampelis cedrorum.** CEDAR WAXWING.—Common throughout the summer.

92. **Vireo gilvus.** WARBLING VIREO.—Common summer resident. Frequents deciduous trees, and is often seen darting out after passing insects. Very restless, and sings almost constantly.

93. **Vireo solitarius cassini.** CASSIN'S VIREO.—Summer resident; more common than the preceding. Frequents the coniferous growth, but is often found in the alders and aspens.

In variety and richness of notes Cassin's Vireo is not surpassed, if equaled by any of our Vireos. Its clear, metallic notes ring through our forests from earliest dawn until dark. Nests were found in oaks and alders. Both nests and eggs resemble those of *Vireo gilvus*.

94. **Helminthopila celata lutescens.** LUTESCENT WARBLER.—Common summer resident. Nests on the ground, and is very shy when in the vicinity of the nest. During the migrations it frequents the tops of low shrubbery and the smaller trees, whence it is often seen darting out after passing insects. More frequently on the ground during the breeding season. Its song, though short and simple, is quite pleasing, consisting of a few sweet trills and ending with a rising inflection.

95. **Dendroica æstiva.** YELLOW WARBLER.—An abundant summer resident. Frequents the deciduous trees more than the following, and is less on the ground.

96. **Dendroica auduboni.** AUDUBON'S WARBLER. — Very common migrant; a few breed in the more elevated parts of the county. The Audubon is the first Warbler to arrive here in the spring, and is first seen about March 1, usually coming in pairs or a company of pairs. Its habits are nearly identical with those of the common Yellow-rump.

97. **Dendroica townsendi.** TOWNSEND'S WARBLER.—Rare. One seen in the spring of 1884.

98. **Dendroica nigrescens.** BLACK-THROATED GRAY WARBLER.—A quite common summer resident. Frequents the thick firs, seldom being seen in deciduous trees until the breeding season. Of its nesting habits I could learn next to nothing, although for days I followed birds that I was sure were building. At this time they are quite shy and retired in their habits, frequenting the younger growth of firs, and thickets of alder and willow, so dense that one can scarcely see a rod in advance. It often requires considerable patience and perseverance to secure this little sylph. I have followed one for as much as half-a-mile through the thickets while, like a will-o'-the-wisp, it led me on, fluttering

occasionally into sight for an instant, a few feet ahead, and the next minute uttering its song as far in the rear.

99. **Geothlypis macgillivrayi.** MACGILLIVRAY'S WARBLER.—Common summer resident; frequents the low, tangled shrubbery, and is much on the ground. Quite shy in its habits. Its alarm note is a single *chat*, given with considerable spirit by both sexes, when disturbed in the vicinity of the nest. A nest, found June 1, was in a small hazel one foot from the ground, composed of dry grass and lined with finer grass and a few horse hairs. It contained four young about five days old.

100. **Geothlypis trichas occidentalis.** WESTERN YELLOW-THROAT.—Very common summer resident. Pacific coast Yellow-throats are of a richer yellow than specimens from the Atlantic, some very fine males being of a rich orange on the throat.

101. **Icteria virens longicauda.** LONG-TAILED CHAT.—A rare summer visitor. Very retired in its habits.

102. **Sylvania pusilla pileolata.** PILEOLATED WARBLER.—Rather a rare migrant.

103. **Anthus pensilvanicus.** AMERICAN PIPIT.—Abundant for a few days during migrations. Seen in large restless flocks in company with *Otocoris alpestris leucolæma*.

104. **Salpinctes obsoletus.** ROCK WREN.—Very rare; probably a wanderer from the mountains. One taken in May, 1885.

105. **Thryothorus bewickii spilurus.** VIGORS'S WREN.—Quite common up to December 15, 1884, when the snow drove it south. Only three were seen this spring (1885).

106. **Troglodytes aëdon parkmani.** PARKMAN'S WREN.—Very common summer resident; has all the habits and appearance of the Eastern bird.

107. **Anorthura troglodytes pacificus.** WESTERN WINTER WREN.—Common winter resident. Generally found in some brush pile in the deep timber. Its song, frequently heard in December and January, is quite low, but remarkably sweet, clear, and liquid.

108. **Cistothorus palustris.** LONG-BILLED MARSH WREN.—Summer resident; not very common; in favorable localities stays until quite late.

109. **Sitta carolinensis aculeata.** SLENDER-BILLED NUTHATCH.—A not uncommon resident. Keeps well in the pines and firs, with the following.

110. **Sitta pygmæa.** PYGMY NUTHATCH.—Rather rare; a few seen in spring.

111. **Psaltriparus minimus.** BUSH-TIT.—Common resident; breeds in the thickets of ash and willow. Their beautiful pensile nests seem out of all proportion to the size of the bird.

112. **Parus atricapillus occidentalis.** OREGON CHICKADEE.—Very common resident, with all the habits of the eastern *atricapillus*.

113. **Parus rufescens.** CHESTNUT-BACKED CHICKADEE.—Common winter resident. First seen in December in company with *occidentalis*. A few lingered to breed, but disappeared as soon as the first brood was

raised. A nest was found on April 28, in a big fir stub, three feet four inches in diameter. About twelve feet from the ground was a hole, not over an inch in diameter, running horizontally three inches, then turning downward for six inches before opening out into the nest, which was of cow and rabbit hair. It contained seven eggs, with large embryos.

114. **Regulus calendula.** RUBY-CROWNED KINGLET.—Not uncommon winter resident. Usually seen in company with the two following species. The Ruby-crown of this region is darker than those taken farther east.

115. **Regulus satrapa olivaceus.** GOLDEN-CROWNED KINGLET.—Much more common than the preceding. Usually seen throughout the winter. Our cold weather of last winter, however, drove all the Kinglets south, and the few which returned were very tardy. The Golden-crowns, however, must have chosen a different route north, for only five or six were seen during the spring migration, in place of the thousands in the spring of 1884.

116. **Turdus ustulatus.** RUSSET-BACKED THRUSH.—Not uncommon summer resident. During the first week after its arrival it is very shy and silent, keeping in the darkest and deepest thickets, uttering a single *chuck* of alarm when disturbed. As their numbers increase, a few are heard singing at dusk and in the early morning; by the time they have all arrived the woods fairly ring with the clear metallic song of this and the following species. It nests in dark secluded thickets.

117. **Turdus aonalaschkæ.** DWARF HERMIT THRUSH.—Common summer resident. Arrives about April 20, with the preceding, which it closely resembles in habits and song.

118. **Merula migratoria propinqua.** WESTERN ROBIN.—Abundant nearly the entire year, only leaving for a few days in the wet season. Several having white markings were noted, and one nearly or quite pure albino was seen.

119. **Hesperocichla nævia.** VARIED ROBIN. 'Mountain Robin,' 'Swamp Robin' of the natives.—An abundant winter resident; first seen late in September. When they first arrive they are very shy and keep in the darkest recesses of the fir forests, where only the *cluck* of alarm, or an occasional call-note is heard. As their numbers increase they are seen in flocks feeding in the meadows. In December and January they were quite tame, coming about the farm-houses and orchards, feeding on frozen apples and whatever they could pick up. Specimens taken during the heavy storms last winter (1884-'85) were mere skeletons and in very ragged plumage; some taken in January were still moulting. One bird was seen with a white patch as large as a silver half-dollar between the wings. They usually leave for the north before the last of March, although a few linger into April, and show the same shy disposition as the September birds.

120. **Sialia mexicana.** CALIFORNIA BLUEBIRD.—Very common summer resident. The Bluebird is the same cheery, happy fellow here that he is everywhere. Nests in hollow stubs or dead trees, from four to one hundred feet up.

AN ORNITHOLOGICAL RECONNAISSANCE IN WESTERN NORTH CAROLINA.

BY WILLIAM BREWSTER.

(*Concluded from p. 112.*)

63. **Vireo flavifrons.** YELLOW-THROATED VIREO.—This Vireo was not met with in either Buncombe or Yancy Counties, but a few were seen about Old Fort, and in Jackson and Macon Counties it was rather common, haunting open oak woodlands from the lower valleys (Franklin) to about 4000 feet (Highlands). The song was less rich and full than at the North, but otherwise similar.

64. **Vireo noveboracensis.** WHITE-EYED VIREO.—Found only in the lower valleys, where it occurred sparingly and at rather wide intervals in thickets bordering streams.

65. **Vireo olivaceus.** RED-EYED VIREO.—Common everywhere below 4000 feet, but nowhere as abundant as at the North. The song was normal, but the single specimen taken (at Sylva, May 30) differs from any that I have ever seen in lacking the usual ashy of the head and greenish suffusion over the back, the entire upper parts being nearly concolor and of a dull smoky brown. It is possible that a good series of specimens will prove these differences to be characteristic of birds from this region.

66. **Vireo gilvus.** WARBLING VIREO.—Found only at Old Fort and along the Swannanoa River near Asheville. It was common in both localities, but especially so in the red birches, sycamores, and maples overhanging the Swannanoa, where three or four were often heard singing in adjoining trees.

67. **Mniotilta varia.** BLACK-AND-WHITE CREEPER.—Very common in hardwood forests, ranging to at least 4500 feet (near Highlands). Song normal.

68. **Helminthophila chrysoptera.** GOLDEN-WINGED WARBLER.—Common in Jackson and Macon Counties, ranging from 2000 to 4100 feet, and haunting open oak woodlands, and second growth on hillsides. In many such tracts it seemed to be the most abundant and characteristic species; in others, apparently similar in every way, it was nearly or quite wanting. The males sang in the tops of the tallest trees and were very shy; the song is precisely as at the North. I did not find the species in either Buncombe or Yancy Counties.

69. **Compsothlypis americana.** BLUE YELLOW-BACKED WARBLER.—Irregularly distributed and common nowhere. I found a few at Old Fort (McDowell County), one on the banks of the French Broad near Asheville, one at Franklin, and several between Franklin and Highlands. All these were in hardwood timber, singing in the tops of the taller trees. I saw none at Highlands, although many of the trees there were hung with *Usnea* 'moss.' In the localities where my specimens were found there was neither *Usnea* nor *Tillandsia*.

70. **Dendroica æstiva.** YELLOW WARBLER.—Abundant everywhere below 2800 feet, especially in willows and sycamores along the banks of streams. Throughout the region its song was very different from that of our northern bird and bore a much closer resemblance to the song of the Nashville Warbler, for which, indeed, I at first mistook it.

71. **Dendroica cærulescens.** BLACK-THROATED BLUE WARBLER.—I heard the first Black-throated Blue Warbler on the crest of the Cowee Mountains, but at the time supposed it to be a belated migrant. On the following day, however, others were met with at Cullasaja Falls, and along the road between that point and Highlands many were seen or heard. In the neighborhood of Highlands they were everywhere numerous, and in the extensive rhododendron swamps, literally swarming and evidently settled for the season, if not actually breeding. Mr. Boynton tells me that he regularly hears them singing in these swamps through June and July, but he has never found the nest. On the Black Mountains they were scarcely less numerous in belts of rhododendrons bordering streams at between 3200 and 4500 feet, but curiously enough none were seen above the latter elevation, although the balsam forests on the upper slopes of these mountains would seem to furnish congenial haunts.

72. **Dendroica pensylvanica.** CHESTNUT-SIDED WARBLER. — Generally distributed between 2000 and 4000 feet, but nowhere really numerous. Indeed, I rarely saw more than one or two in any single day. As in New England, they frequented wood edges and openings, especially such as were bordered by thickets of blackberry bushes or hazels. They were also found in rhododendrons. The song was perfectly normal.

73. **Dendroica blackburniæ.** BLACKBURNIAN WARBLER.—In Jackson and Macon Counties this Warbler was abundant everywhere above 3000 feet, but I heard only one in Yancy County,—on the side of the Black Mountains at 3300 feet. On the crest of the Cowee Range, and about Highlands, they were among the commonest and most conspicuous woodland birds, frequenting old oak timber interspersed with hemlocks or bordering hemlock swamps. In these evergreens they were evidently breeding, or about to breed, for the males were in full song and paired, and I noticed that each had its particular hemlock which it guarded with jealous care, driving away all other small birds that came into or near it. The song here was peculiar, but still not sufficiently so as to be unrecognizable. Several males which I shot near Highlands differ from northern specimens in having the orange of the throat duller and paler.

74. **Dendroica dominica.** YELLOW-THROATED WARBLER. — Met with only twice, near Old Fort, May 23, and at Sylva, May 30. At the former place one was heard singing; at the latter a pair were feeding full-fledged young. I shot the male and found, as I expected, that it was a typical *dominica*.

75. **Dendroica virens.** BLACK-THROATED GREEN WARBLER. — Very curiously, this species was detected only on the Black Mountains, where it was confined to the balsam forests, above 5000 feet. It was one of the most abundant and characteristic birds here, and apparently settled for the summer. The song was perfectly normal.

76. **Dendroica discolor.** PRAIRIE WARBLER.—Met with only at Old Fort, where it was common in brush-grown pastures and tracts of young second-growth on hillsides.

77. **Seiurus aurocapillus.** OVENBIRD. — The open oak woodlands, so prevalent in this region, are in every way adapted to the requirements of the Ovenbird, and throughout them it is one of the commonest and most characteristic summer birds. I did not find it above 4500 feet.

78. **Seiurus motacilla.** LARGE-BILLED WATER-THRUSH.—Only four individuals met with, two in rhododendron swamps near Highlands, the others on the banks of the Tuckaseegee River, between East La Porte and Sylva, at an elevation of only 2150 feet. One of the Highlands specimens was found at fully 4500 feet.

79. **Geothlypis formosa.** KENTUCKY WARBLER.—Generally distributed in the valleys and over the mountain sides to about 3500 feet. It was usually found in open woodland about logs or fallen tops, but also occurred in the rhododendrons. In both situations it was an uncommon, inconspicuous species, oftener heard than seen.

80. **Geothlypis trichas.** MARYLAND YELLOW-THROAT.—Rather common in the lower valleys, especially in thickets near streams or meadows Not seen above 2100 feet.

81. **Icteria virens.** YELLOW-BREASTED CHAT.—The Chat was abundant everywhere in the valleys and over the lower slopes of the mountains to at least 2200 feet

82. **Sylvania mitrata.** HOODED WARBLER.—Found sparingly but very generally in rhododendron thickets along streams, ranging to at least 3800 feet. Song normal.

83. **Sylvania canadensis.** CANADA FLYCATCHER. — Abundant from about 3000 feet nearly, or quite, to the tops of the highest mountains. Over the lower portions of its range it frequented rhododendron thickets bordering streams, above 5000 feet, the balsam forests. As its vertical distribution extends downward below the upper limits of that of *S. mitrata* the two species probably come together in places, although I saw no instances of this. At Highlands, June 1, 1885, Mr. Boynton found a nest placed "in a grassy spring-bank," and "composed chiefly of old leaf-stems and small roots, lined with fine black roots which resemble hair." It contained four perfectly fresh eggs.

84. **Setophaga ruticilla.** AMERICAN REDSTART.—I saw only a very few Redstarts—certainly less than a dozen—all in the lower valleys, and the majority among alders along streams.

85. **Mimus polyglottos.** MOCKINGBIRD. — Confined to the lower valleys, where it is uncommon and very locally distributed. I found it most numerous about Asheville, where at least three or four pairs were seen.

86. **Galeoscoptes carolinensis.** CATBIRD.—One of the most numerous and evenly distributed birds of the region, occurring almost everywhere below 4000 feet.

87. **Harporhynchus rufus.** BROWN THRASHER.—Much less common than the preceding species, but still frequently met with, especially on

brushy hillsides in the lower valleys. I did not detect it anywhere above 3000 feet, but was told that it is occasionally seen at Highlands (4000 feet).

88. **Thryothorus ludovicianus.** CAROLINA WREN.—This species was common in the valleys, and sparingly distributed over higher ground to an elevation of at least 4000 feet. It was nowhere nearly as numerous, however, as in the coast region of South Carolina.

89. **Thyothorus bewickii.** BEWICK'S WREN.—Confined almost exclusively to the towns, where it was usually one of the most abundant and conspicuous birds. It is, in fact, the 'House Wren' of this region, and in some respects is even more familiar and confiding than this better known relative. At Asheville it was breeding in such numbers that nearly every shed or other out-building harbored a pair, the male of which sang through the greater part of the day from the ridgepole or gable end of the roof. The song is sweet and exquisitely tender—one of the sweetest and tenderest strains I know. It recalls that of the Song Sparrow, but is more prolonged, varied, and expressive. This species resembles other Wrens (especially *T. ludovicianus*) in habits and motions, creeping and hopping about under eaves of buildings, and along fences, entering every hole and crevice, and appearing and disappearing like a mouse. Its slender shape and long tail give it, however, a somewhat peculiar appearance—much like that of the *Polioptilæ*. The tail is habitually carried above the line of the back, although its position and inclination are constantly changing. It is not moved in the usual jerky Wren-fashion, but rather slowly and deliberately. In a breezy situation it often seems quite beyond the bird's control, waving about with every passing puff of air.

90. **Troglodytes hiemalis.** WINTER WREN.—This species was met with only on the Black Mountains, where it was abundant throughout the balsams, from 5000 to 6000 feet, filling these lonely forests with its exquisite melody at all times of the day. The song here seemed to me even finer than at the North. Once or twice I caught a glimpse of one of the singers perched on some low stump or moss-grown rock, but to my disappointment I failed to secure a specimen.

91. **Certhia familiaris americana.** BROWN CREEPER.—Common about Highlands, and abundant in the 'balsams' on the Black Mountains, but not seen in either locality below 4000 feet. At Highlands they frequented hemlocks in the 'laurel' swamps, and girdled stumps bordering clearings. The female of a pair shot May 29 was incubating. The males were in full song everywhere, and their notes seemed to me identical with those of the northern bird. My specimens are rather browner than spring examples from New England, but in other respects similar. Mr. Boynton has taken the nest at Highlands. It was built in the usual way, behind a scale of loose bark.

92. **Sitta carolinensis.** WHITE-BELLIED NUTHATCH.—Only four seen, one at Franklin in the trees shading the main street of the village, the other three at Highlands in oak woodland.

93. **Sitta canadensis.** RED-BELLIED NUTHATCH.—In the balsams of the Black Mountains, from about 5000 feet to the top of the main ridge (6000 feet), this Nuthatch was more abundant than I have ever seen it elsewhere. Whenever I stopped to listen or look around its whining, nasal

call was sure to be one of the first sounds that came to my ears, and often three or four different birds would be heard at once. They were usually invisible—high in the tops of the matted evergreens, but I occasionally caught sight of one hanging head downward at the end of a branch, or winding up the main stem of the tree. A pair had a nest in a short dead prong near the top of a yellow birch which grew near the bridle path. I was unable to examine it, but it must have contained young, for both parent birds repeatedly entered the hole bearing food in their bills. A male shot on this mountain is indistinguishable from New England specimens.

Near Highlands, at an elevation of about 4000 feet, I found a single pair of these Nuthatches in an extensive 'laurel swamp,' shaded by giant hemlocks. They were undoubtedly breeding, although I did not succeed in finding the nest.

94. **Parus bicolor.** TUFTED TITMOUSE.—Generally distributed from the valleys to the upper edges of the hardwood forests on the mountain sides, but nowhere common.

95. **Parus atricapillus.** BLACK-CAPPED CHICKADEE.—This northern species, which, if I am not mistaken, has never been previously found south of Virginia, proved to be not uncommon in the 'balsam' belt of the Black Mountains. Its notes and habits here were precisely the same as at the North, and very different from those of *P. carolinensis*, with which it mingled along the lower borders of its range. Like most of the birds inhabiting these mountains, it was exceedingly shy, so much so indeed that I had the greatest difficulty in getting specimens. These represent two pairs, of which both females were incubating. All four differ from northern examples in being smaller, with much slenderer, more acute bills, and generally deeper, browner tints, especially on the back and sides, which are nearly as richly colored as in autumnal specimens from New England. These characteristics, if constant, should perhaps entitle the North Carolina form to subspecific recognition.

96. **Parus carolinensis.** CAROLINA CHICKADEE.—Common, and very generally distributed, ranging from the lowlands to at least 5000 feet, and probably still higher. On the Black Mountains I found it breeding sparingly along the lower edge of the balsam belt, and thus actually mingling with *P. atricapillus*. In one place a male of each species was singing in the same tree, the low plaintive *tswee-dee—tswee-dee* of the *P. carolinensis*, contrasting sharply with the ringing *te-derry* of its more northern cousin. The fact that the two occur here together and that each preserves its characteristic notes and habits, should forever settle all doubts as to their specific distinctness.

A nest found June 2 at the foot of these mountains was in a shallow cavity in the end of a fence rail by the roadside. It contained six young, fully fledged and apparently large enough to fly. They made a pretty picture—the circle of black and white heads peering out curiously at the entrance.

97. **Regulus satrapa.** GOLDEN-CRESTED KINGLET.—Throughout the sombre balsam forest on the upper slopes and ridges of the Black Moun-

tains this Kinglet was one of the most numerous and characteristic birds. The males were in full song at the time of my visit (June 1, 2), but as they kept well up in the tree-tops it was next to impossible to get a sight at one. Indeed, the single specimen which I shot cost more than an hour's persistent labor. This specimen seems to be identical with northern birds. The song, also, was quite normal.

98. **Polioptila cærulea.** BLUE-GRAY GNATCATCHER.—Seen only along the road between Webster and Franklin, and on the outskirts of the latter town, where it was common throughout an extensive tract of post-oak scrub.

99. **Turdus mustelinus.** WOOD THRUSH.—Abundant, and generally distributed, ranging from the lowest valleys to at least 4500 feet, on the mountain sides, and breeding everywhere, but most numerously in thickets of rhododendrons near streams. Two nests, each containing four fresh eggs, were found at Highlands; one, May 27, in a cornel (*Cornus florida*); the other, May 28, in a rhododendron (*Rhododendron maximum*).

100. **Turdus fuscescens.** WILSON'S THRUSH. — Abundant over the elevated plateau about Highlands, and scarcely less numerous on the Black Mountains, ranging in both localities from about 3500 to 5000 feet. Like the Wood Thrush this species haunted, by preference, rhododendron thickets along streams, and in many of these tangled retreats it was far more numerous than I have ever seen it at the North. Its call-notes were louder, sharper, and more penetrating than those of our New England bird. The song, also, was clearer, more varied, and altogether finer.

On the Black Mountains Wilson's Thrushes abounded in the dense evergreen forest of spruces and balsams at, and for a little distance above, 5000 feet. Two specimens which I shot here are somewhat larger than New England examples, and decidedly browner. Mr. Boynton has repeatedly found the nest of this species at Highlands, usually in the top of a fallen tree, sometimes on a mound surrounded by water or springy ground.

101. **Merula migratoria.** AMERICAN ROBIN. — Irregularly but very generally distributed over the region from the lowest valleys nearly, if not quite, to the summits of the highest mountains. In the low country it was seen only in or near towns, where it had all the familiar habits of our northern bird; but on the sides and tops of the mountains it occurred miles away from any house or clearing, and in the wildest possible places. It was most numerous at Highlands, and on the Black Mountains, between 4000 and 5800 feet. Throughout the entire mountain region its song and habits seemed to be perfectly normal. A female shot May 27 was laying. This and another specimen (male, May 28) are smaller than northern examples and the throat in both is nearly immaculate.

102. **Sialia sialis.** BLUEBIRD.—Common, ranging up to about 4000 eet. Although often seen in the wilder portions of this region, it evidently preferred the neighborhood of towns and houses, where, unmolested by the quarrelsome House Sparrow, it bred in boxes put up for its reception and showed all that charming familiarity and confidence which once characterized our New England Bluebird.

Species of whose occurrence during autumn or winter I obtained satisfactory proof.

1. **Podilymbus podiceps.** PIED-BILLED GREBE—At Highlands I examined the skin of one of these Grebes which had been shot the preceding autumn in a mill-pond near the town.

2. **Branta canadensis.** CANADA GOOSE.—Often seen in small numbers during the spring and autumn migrations.

3. **Porzana carolina.** CAROLINA RAIL.—Of irregular occurrence near Asheville in early autumn. One gentleman assured me that during a heavy easterly storm in September, 1883, he bagged twenty specimens in the meadows along the French Broad River.

4. **Gallinago delicata.** WILSON'S SNIPE.—This well-known game bird visits the meadows about Asheville in sufficient numbers to afford fairly good shooting. It occurs only during the spring and autumn migrations.

5. **Ardea herodias.** GREAT BLUE HERON.—Seen occasionally along the French Broad River.

6. **Ectopistes migratorius.** WILD PIGEON.—Said to occur in numbers in autumn and winter, especially when beech mast is abundant.

7. **Accipiter velox.** SHARP-SHINNED HAWK.—At Highlands I was shown the wings and tails of several specimens shot the preceding autumn.

8. **Falco sparverius.** SPARROW HAWK.—I include this Hawk on precisely the same evidence as the Sharp-shin, viz., that of the examination of some wings and tails in the possession of a gentlemanat Highlands. The species probably breeds also, but of this I have no proof.

9. **Buteo borealis.** RED-TAILED HAWK.—An adult female, very large and pale, shot by Mr. Boynton at Highlands, February 8, 1886, reaches me just in time for mention in this connection. With it Mr. Boynton also sends:

10. **Melanerpes carolinus.**—RED-BELLIED WOODPECKER.—A male shot at Highlands (4000 ft.) Feb. 6, 1886.

11. **Scolecophagus carolinus.** RUSTY GRACKLE.—One taken at Highlands, January 23, 1886. "It has been about the town all winter in company with a flock of Meadow-larks."

A LIST OF THE BIRDS OBTAINED IN VENTURA COUNTY, CALIFORNIA.

BY BARTON W. EVERMANN.

(*Concluded from p. 94.*)

101. ***Phalænoptilus nuttali.** (418.) POOR-WILL.—Summer resident; not common. During two years I secured but one specimen.

102. ***Chordeiles virginianus henryi.** (420 *a*.) WESTERN NIGHTHAWK.—Common migrant; a few breed.

103. **Micropus melanoleucus.** (425.) WHITE-THROATED SWIFT.—On February 19, 1881, while on a high *mesa* near where Santa Paula Creek enters the valley, I saw perhaps a score of White-throated Swifts circling high in air overhead. Toward evening they came lower down and I succeeded in getting three fine specimens, two females and one male. I saw the bird on a few other occasions, but never secured any other specimens.

104. ***Trochilus alexandri.** (429.) BLACK-CHINNED HUMMINGBIRD.—Rather common summer resident.

105. ***Trochilus costæ.** (430.) COSTA'S HUMMINGBIRD. — Summer resident, rare. I have but one specimen obtained in the county.

106. ***Trochilus annæ.** (431.) ANNA'S HUMMINGBIRD.—A summer resident; more common than either of the preceding.

107. ***Trochilus rufus.** (433.) RUFOUS HUMMINGBIRD.—This I consider the most abundant species of the Hummers found in the county. It is resident, except for a few weeks in midwinter. I found it very common in April and May in the thickets near the mouth of the Santa Clara River.

Allen's Hummingbird (*Trochilus alleni*) (434) likely occurs in the county, but as I never identified it I do not include it in this list.

108. ***Tyrannus verticalis.** (447.) WESTERN KINGBIRD.—A rather common summer resident, arriving last week in March. Full sets of eggs may be found by May 1.

109. ***Tyrannus vociferans.** (448.) CASSIN'S KINGBIRD. — Summer resident; more common than *verticalis*. Breeds perhaps a little earlier. The eggs of these two species can hardly be distinguished with certainty, hence the birds should be identified before taking the eggs.

110. ***Myiarchus cinerascens.** (454.) ASH-THROATED FLYCATCHER.—A summer resident; arrives about the middle of April. Not very common.

111. **Sayornis saya.** (457.) SAY'S PHŒBE.—A winter resident; not common. I think a few remain to breed, though I never found its nest.

112. ***Sayornis nigricans.** (458.) BLACK PHŒBE.—A common resident throughout the year. Nests as early as April 1.

113. ***Contopus richardsoni.** (462.) WESTERN WOOD PEWEE.—This species is a summer resident, but not common. I have two specimens secured in Ventura County.

114. ***Empidonax hammondi.** (468.) HAMMOND'S FLYCATCHER.—Summer resident; not common. I have one specimen obtained at Santa Paula, April 10.

115. ***Empidonax obscurus.** (469.) WRIGHT'S FLYCATCHER.—I never identified this species as a resident of Ventura County. The only reason why I include it is based upon a set of four eggs which were brought me by a boy at Santa Paula, and which I refer to this species. In color the eggs are a pure white, unspotted, and measure .72 × .60, .73 × .61, .73 × .60.

116. **Otocoris alpestris rubea.** (474 *f.*) RUDDY SHORE LARK.—An abundant winter resident, often seen in very large flocks. I do not know that any breed in the county. I have seen several specimens taken in the county that differed very little if any from typical *alpestris.*

117. ***Corvus americanus.** (488.) AMERICAN CROW.—Common resident.

118. ***Corvus caurinus.** (489.) NORTHWEST CROW.—An abundant resident.

119. ***Pica nuttalli.** (476.) YELLOW-BILLED MAGPIE.—This noisy bird is resident in the county and abundant in suitable places. They are most likely to be found in any cañon where sheep or other stock are herded. In Wheeler Cañon, near Santa Paula, I always found them abundant. On April 2, 1881, I obtained over sixty eggs from nests in this cañon.

120. ***Cyanocitta stelleri frontalis.** (478 *a.*) BLUE-FRONTED JAY.—Resident in the mountains among the evergreens. I never saw this species in the county except near the head of Santa Paula Creek.

121. ***Aphelocoma californica.** (481.) CALIFORNIA JAY.—This Jay is one of the most common and generally distributed birds of the county. It is resident, and begins nesting as early as the first week in March.

122. **Xanthocephalus xanthocephalus.** (497.) YELLOW-HEADED BLACKBIRD.—Abundant winter resident. Most frequently seen in early morning about where hogs are fed. I never found its nest, but think it breeds in the marshes near the coast.

123. ***Agelaius gubernator.** (499.) BICOLORED BLACKBIRD.—Common; resident.

124. ***Agelaius tricolor.** (500.) TRICOLORED BLACKBIRD.—An abundant resident.

125. ***Sturnella magna neglecta.** (501 *b.*) WESTERN MEADOW LARK.—Abundant in winter; a few remain to breed.

126. ***Icterus cucullatus nelsoni.** (585 *a.*) ARIZONA HOODED ORIOLE.—This handsome bird is a common summer resident, arriving about the first of April. I have traced it as far north as Santa Barbara. It has never before been recorded north of Los Angeles, I believe.

127. ***Icterus bullocki.** (508.) BULLOCK'S ORIOLE.—Summer resident; somewhat more common than the Hooded. Arrives last week in March.

128. ***Scolecophagus cyanocephalus.** (510.) BREWER'S BLACKBIRD.—One of the most abundant residents. Nests usually in the live-oaks near dwellings.

129. **Carpodacus purpureus californicus.** (517 *a.*) CALIFORNIA PURPLE FINCH.—A rare winter visitant.

130. ***Carpodacus frontalis rhodocolpus.** (519 *a.*) CRIMSON HOUSE FINCH.—Resident. Perhaps the most abundant bird of the county. Nests anywhere and everywhere,—in porches, old cans, in holes or on limbs of trees, in sides of haystacks, and even in the meshes of the nests of Crows and the larger Hawks. I have found its nest in all these various positions. I have the nest of a Bullock's Oriole inside of which is a House Finch's nest. It contained a full set of eggs when found.

This little bird is much like the English Sparrow now devastating thi country, and is in very bad repute among fruit men, who regard it as their worst enemy among the birds.

131. ***Spinus tristis.** (529.) AMERICAN GOLDFINCH. -- Common. Resident throughout the year.

132. ***Spinus psaltria.** (530.) ARKANSAS GOLDFINCH. —Not common. Resident from April to October.

133. ***Spinus lawrencei.** (531.) LAWRENCE'S GOLDFINCH.—Common summer resident. Probably the most abundant representative of the genus. Its eggs are readily distinguishable from those of the two preceding by being pure white, while the others are light green, or greenish white.

134. ***Ammodramus sandwichensis alaudinus.** (542 *b.*) WESTERN SAVANNA SPARROW.—Resident in old fields and meadows. Not common.

135. ***Ammodramus beldingi.** (543.) BELDING'S MARSH SPARROW. —Resident; frequent near the coast.

136. **Poocætes gramineus confinis.** (540 *a.*) WESTERN VESPER SPARROW.—Resident? Not common.

137. ***Chondestes grammacus strigatus.** (552 *a.*) WESTERN LARK SPARROW.—Common resident. Scarcely distinguishable from the eastern form.

138. **Zonotrichia gambeli.** (556.) GAMBEL'S SPARROW.—An abundant winter resident.

139. **Zonotrichia coronata.** (557.) GOLDEN-CROWNED SPARROW.— Winter resident; frequent in the foothills and mountains; seldom seen in the valleys.

140. *** Spizella socialis arizonæ.** (560 *a.*) WESTERN CHIPPING SPARROW.—Summer resident. Rare.

141. **Junco hyemalis oregonus.** (567 *a.*) OREGON JUNCO.—Rare winter resident. Seen oftenest high up in the mountains.

142. **Amphispiza belli.** (574.) BELL'S SPARROW.—A rare winter resident among the hills. A pair of fine specimens were gotten October 30, in the mountains near Santa Paula.

143. **Peucæa ruficeps.** (580.) RUFOUS-CROWNED SPARROW.—A rather common resident, but found only among the mountains.

144. *** Melospiza fasciata heermanni.** (581 *c.*) HEERMANN'S SONG SPARROW.—Resident; not very common.

145. *** Melospiza fasciata samuelis.** (581 *d.*) SAMUELS'S SONG SPARROW.—Resident; common.

146. *** Melospiza fasciata guttata.** (581 *e.*) RUSTY SONG SPARROW.— Resident. Rare.

147. *** Pipilo maculatus megalonyx.** (588 *a.*) SPURRED TOWHEE.— Resident. Common.

148. *** Pipilo fuscus crissalis.** (591 *b.*) CALIFORNIA BROWN TOWHEE. —Resident. One of the most abundant and best known birds.

149. *** Habia melanocephala.** (596.) BLACK-HEADED GROSBEAK.— Summer resident; common. Arrives about April 23. A sweet and pleasing songster.

150. **Guiraca cærulea.** (597.) BLUE GROSBEAK.—Rare. Perhaps a summer resident, but I have never seen it except in the spring.

151. *** Passerina amœna.** (599.) LAZULI BUNTING.—This beautiful little bird is rather common as a summer resident.

152. **Piranga ludoviciana.** (607.) WESTERN TANAGER.—A summer resident; not common. It doubtless breeds in the county, although I never succeeded in finding its nest. Arrives from the south about the 23d of April.

153. *** Progne subis.** (611.) PURPLE MARTIN. — Summer resident; moderately common, nesting usually in holes in trees. It does not seem to have adopted, to any great extent, the custom of nesting in boxes, so common with this species 'back in the States.'

154. *** Petrochelidon lunifrons.** (612.) CLIFF SWALLOW.—An abundant summer resident. In 1881, a colony of more than a hundred pairs nested in a shed in Santa Paula. The nests were fastened to the rafters, much after the manner of the Barn Swallow. Many horse-hairs were plastered into the nests and these often caused the death of the builders. I took from this shed some six or eight dead birds which I found hanging about the nests, they having gotten entangled in the hairs.

155. *** Chelidon erythrogaster.** (613.) BARN SWALLOW.—Summer resident, but not common.

156. *** Tachycineta bicolor.** (614.) TREE SWALLOW. — Summer resident, abundant. Many breed in holes in the willows near the mouth of the Santa Clara River.

157. ***Tachycineta thalassina.** (615.) VIOLET-GREEN SWALLOW.—This beautiful Swallow is rather common during the spring migrations. A few remain to breed.

158. ***Clivicola riparia.** (616.) BANK SWALLOW.—Summer resident; locally abundant.

159. ***Stelgidopteryx serripennis.** (617.) ROUGH-WINGED SWALLOW.—Perhaps a common summer resident, but usually confounded with the preceding.

160. **Ampelis cedrorum.** (619.) CEDAR WAXWING.—A frequent winter visitant. Often seen in flocks of six to twenty about the pepper-trees, upon the berries of which they feed.

161. ***Phainopepla nitens.** (620.) PHAINOPEPLA.—This is to me one of the most interesting of the birds found in this part of the State. On October 15, 1879, I first met with this species,—a young male which I found in the valley near Santa Paula. While collecting Gambel's Sparrows and Spurred Towhees along a brush-fence I observed this bird flying from one stake to another, darting out frequently after some passing insect. I saw no others until early in the following May, when I met with a flock of a dozen or more in Santa Paula Cañon. They were feeding upon certain insects then common about the elder and sumac bushes which grow plentifully in that part of the cañon. I did not observe them again until August (I was unable to visit the cañon during the summer), when I again found them in small flocks feeding upon the berries of the choke-cherry. Here they remained until late in October, when they migrated southward, to return again about the middle of April. On

May 4 a nest was found, saddled near the end of a horizontal limb of a live-oak which stood in a pasture in the valley, but near the mouth of Santa Paula Cañon. This nest contained *three* fresh eggs, which measured .90 × .64, .92 × .62, and .89 × .62. Other nests were found May 12, 13, 17, and 19, and June 2. Of the seven nests found by me only one was out in the valley, the others all being in Santa Paula Cañon. All of these nests were in live-oaks, but I have since been informed by Mr. Fred. Corey of Santa Paula, that he has recently found them in pepper-trees, blue-gums, and elders. From these seven nests twenty eggs were obtained, *three* being the number in each clutch except one, which contained but two. In Arizona, Capt. Bendire has found many nests of this bird, but with never more than two eggs in a set, and it was not known that more than two eggs to the set were ever laid until these nests were found by me.* The average measurements of eighteen eggs are .925 × .652, and thus somewhat larger than those of Arizona specimens.

In the 'Ornithologist and Oölogist,' Vol. VII, p. 179, I speak of the song of this bird, which I have often heard at nightfall in the cañon above mentioned. This song is sweet and plaintive, agreeing essentially with the description of Dr. J. G. Cooper and Dr. Coues, who seem to be the only observers who have hitherto been willing to credit the Phainopepla with any ability as a bird of song.

Santa Paula Cañon seems to be the favorite ground in this county for this bird; only in three other places in the county have I seen it. These are (1) a few individuals in the Santa Clara Valley about Santa Paula, (2) several in the beautiful Ojai Valley, seven to ten miles from Santa Paula, and (3) among the gnarled and moss-grown oaks on the Cacitas Pass, between San Buenaventura and Santa Barbara, where I saw a number in the month of June, but did not have leisure to search for nests.

162. ***Lanius ludovicianus excubitorides.** (622 *a.*) WHITE-RUMPED SHRIKE.—A common resident. This bird is often mistaken for the Mockingbird by the common people, who wonder why the pets they have reared with such care show no inclination to sing.

163. ***Vireo gilvus.** (627.) WARBLING VIREO. — Summer resident, but not common.

164. **Vireo huttoni.** (632.) HUTTON'S VIREO.—Not common. Probably breeds in the county.

165. **Vireo bellii pusillus.** (633 *a.*) LEAST VIREO.—I am not sure that I ever saw this bird, but think I saw a few among the oaks near Si-Sa Cañon in January.

166. **Dendroica æstiva.** (652.) YELLOW WARBLER. — A common migrant. Some may remain to breed, but I do not know that its nest has ever been found in the county.

167. **Dendroica auduboni.** (656.) AUDUBON'S WARBLER.—An abundant winter resident. This is by far the most common species of the family found on the coast.

[* On this point see also W. E. D. Scott, Auk, Vol. II, pp. 242-246, especially the last paragraph of p. 246.—EDD.]

168. **Dendroica graciæ.** (664.) GRACE'S WARBLER.—I never saw but one specimen of this beautiful Warbler,—a male in fine plumage which I shot from a cottonwood tree near Santa Paula, May 3, 1881.

169. **Dendroica nigrescens.** (665.) BLACK-THROATED GRAY WARBLER.

170. **Dendroica occidentalis.** (669.) HERMIT WARBLER.—I never secured specimens of either of these two rare Warblers, but I am confident I have seen them both in the county in April.

171. **Geothlypis macgillivrayi.** (680.) MACGILLIVRAY'S WARBLER.—Migrant. Not common.

172. ***Geothlypis trichas occidentalis.** (681 *a.*) WESTERN YELLOW-THROAT.—A common resident, nesting in the grass or tules about low marshy places.

173. ***Icteria virens longicauda.** (683 *a.*) LONG-TAILED CHAT.—A common summer resident. A very eccentric bird in more ways than one. Often sings at night.

174. ***Sylvania pusilla pileolata.** (685 *a.*) PILEOLATED WARBLER.—Common summer resident in suitable places. Arrives about the first week in April. I found it abundant in the willows near the mouths of the Santa Clara and San Buenaventura Rivers, where I secured its nest and eggs.

175. **Anthus pensilvanicus.** (697.) AMERICAN PIPIT.—An occasional winter visitant.

176. ***Cinclus mexicanus.** (701.) AMERICAN DIPPER.—Frequent along the mountain streams. One of the chief friends of the mountain camper.

177. **Oroscoptes montanus.** (702.) SAGE THRASHER.—A rare migrant. One specimen obtained March 12, 1881, on the Rocky Flat above Santa Paula.

178. ***Mimus polyglottos.** (703.) MOCKINGBIRD.—A common resident. The most renowned of our singing Thrushes. It may often be heard singing at any hour of the night.

179. ***Harporhynchus redivivus.** (710.) CALIFORNIAN THRASHER.—A common resident and noted songster. May be known by its plain brown color and long decurved bill. Nests as early as February 21.

180. ***Campylorhynchus brunneicapillus.** (713.) CACTUS WREN.—A common summer resident where cacti are abundant.

181. ***Salpinctes obsoletus.** (715.) ROCK WREN.—Rare. Perhaps resident in the rocky cañons of the county.

182. ***Catherpes mexicanus conspersus.** (717 *a.*) CAÑON WREN.—Frequent in the higher and rocky cañons, where it is probably resident.

183. ***Thryothorus bewickii spilurus.** (719 *a.*) VIGORS'S WREN.—Rather common locally, but rare about Santa Paula. Resident.

184. ***Troglodytes aëdon parkmani.** (721 *a.*) PARKMAN'S WREN.—An abundant resident throughout the county. Nests in knot holes, hollow limbs, old tin cans, coat sleeves that chance to be hanging in accessible places,—anywhere that happens to strike their fancy.

185. **Sitta carolinensis aculeata.** (727 *a*.) SLENDER-BILLED NUTHATCH.—A rare winter visitant.

186. ***Parus inornatus.** (733.) PLAIN TITMOUSE.—Common resident,—most frequent among clumps of live-oaks.

187. **Parus atricapillus occidentalis.** (735 *a*.) OREGON CHICKADEE.—A rare winter resident.

188. ***Chamæa fasciata.** (742.) WREN-TIT.—Rather common resident. Frequents sage-brush and other chaparral.

189. ***Psaltriparus minimus.** (743.) LEAST TIT.—A rather common resident; found in small flocks of from six to ten in winter. Breeds early, building a long pensile nest, which it usually attaches to the limb of a live-oak. The nest varies much in length, ranging from 4 to 22 inches in extreme length. (See Gentry's 'Nests and Eggs of Birds of the United States,' 131, 1882.)

190. **Regulus satrapa olivaceus.** (748 *a*.) WESTERN GOLDEN-CROWNED KINGLET.—With the preceding, a rare winter resident.

191. **Regulus calendula.** (749.) RUBY-CROWNED KINGLET.—I often met with this diminutive bird among the oaks of the foothills, but only in winter. I do not know that I ever saw it in the valley or larger cañons.

192. ***Polioptila cærulea.** (751.) BLUE-GRAY GNATCATCHER.—This little bird is a moderately common resident, nesting usually in the live-oaks, about the middle of May.

193. ***Polioptila californica.** (753.) BLACK-TAILED GNATCATCHER.—Not so common as the preceding. Resident.

194. **Myadestes townsendii.** (754.) TOWNSEND'S SOLITAIRE.—A very rare migrant. I saw it once or twice in the spring of 1881.

195. **Turdus ustulatus.** (758.) RUSSET-BACKED THRUSH.—A spring and fall migrant. Not common.

196. **Turdus aonalaschkæ.** (759.) DWARF HERMIT THRUSH.—A migrant with the preceding. Perhaps not so common.

197. **Merula migratoria propinqua.** (761 *a*.) WESTERN ROBIN.—An abundant winter resident.

198. **Hesperocichla nævia.** (763.) VARIED THRUSH.—A rare winter visitant; seen only on one occasion.

199. ***Sialia mexicana.** (767.) WESTERN BLUEBIRD.—This bird is a common resident, but seems to lack some of those characteristics which make our eastern species so great a favorite. It is but rarely seen about our dwellings, but stays in more secluded retreats. Boxes which, raised on poles in the garden or about the barn, so readily tempt the eastern cousin, have no charms for our wild western bird. But time, the civilizer, will doubtless work a reform in this bird, and then, instead of confining itself to the oak-grown foothills in winter, and to the cañons and remoter parts of the valleys in summer, it will learn that we are its friends, and will come and build its nest in the hollow limb of the tree by the house, and in the box raised from the garden fence.

200. **Sialia arctica.** (768.) MOUNTAIN BLUEBIRD.—A rare winter visitant. A single individual was seen in December, near Saticoy.

THE BIRDS OF THE WEST INDIES, INCLUDING THE BAHAMA ISLANDS, THE GREATER AND THE LESSER ANTILLES, EXCEPTING THE ISLANDS OF TOBAGO AND TRINIDAD.

BY CHARLES B. CORY.

[*Continued from p. 59.*]

FAMILY VIREONIDÆ.

GENUS **Vireo** VIEILL.

Vireo VIEILLOT, Ois. Am. Sept. I, p. 83 (1807).

Vireo modestus SCL.

Vireo noveboracensis GOSSE, Bds. Jam. p. 192 (1847).

Vireo modestus SCL. P. Z. S. 1860, p. 462.—ALBRECHT, J. f. O. 1862, p. 194.—MARCH, Pr. Acad. Nat. Sci. Phila. 1863, p. 294.—BAIRD, Rev. Am. Bds. p. 362 (1864).—SCL. & SALV. Nom. Avium Neotr. p. 12 (1873).—A. & E. NEWTON, Handb. Jamaica, p. 106 (1881).—GADOW, Cat. Bds. Brit. Mus. VIII, p. 303 (1883).—CORY, List Bds. W. I. p. 10 (1885).

Vireonella modestus GRAY, Handl. Bds. I, p. 382 (1869).

SP. CHAR. *Male:*—Upper plumage dull olive green; throat pale; belly dull yellowish brown; primaries and secondaries brown, edged with dull greenish on the outer webs; coverts edged with dull yellowish white, forming an imperfect wing-band; tail-feathers narrowly edged with olive green.

The sexes are similar.

Length (skin), 4.50; wing, 2.40; tail, 2; tarsus, .65.

HABITAT. Jamaica.

Vireo latimeri BAIRD.

Vireo latimeri BAIRD, Rev. Am. Bds. p. 364 (1864).—BRYANT, Pr. Bost. Soc. Nat. Hist. X, p. 252 (1866).—SCL. & SALV. Nom Avium Neotr. p. 12 (1873).—GUNDL. Anal. Soc. Esp. Hist. Nat VII. p. 135 (1878); *ib.* J. f. O. 1878, p. 158.—GADOW, Cat. Bds. Brit. Mus. VIII, p. 304 (1883).—CORY, List Bds. W. I. p. 10 (1885).

Vireonella latimeri GRAY, Handl. Bds. I, p. 382 (1869).

SP. CHAR. *Male:*—Top of head grayish brown; back olive green; underparts showing throat dull white, shading into bright yellow on the breast and belly; wings and tail brown, feathers edged with pale greenish.

Length (skin), 4.25; wing, 2.25; tail, 1.75; tarsus, .75.

HABITAT. Porto Rico.

Vireo crassirostris (BRYANT).

Lanivireo crassirostris BRYANT, Pr. Bost. Soc. Nat. Hist. VII, p. 112 (1859).—CORY, Bds. Bahama I. p. 83 (1880).

Vireo crassirostris BAIRD, Rev. Am. Bds. p. 368 (1864).—SCL. & SALV. Nom. Avium Neotr. p. 12 (1873).—GADOW, Cat. Bds. Brit. Mus. VIII, p. 300 (1883).—CORY, List Bds. W. I. p. 10 (1885).

Vireonella crassirostris GRAY, Handl. Bds. I, p. 382 (1869).

SP. CHAR. *Male:*—Above yellowish olive; a streak of olive from the nostril, encircling the eye; underparts yellowish; wings and tail brown, the feathers edged with greenish, the former showing two white bands.

Length, 5; wing, 2.40; tail, 1.90; tarsus, .84; bill, .40.

HABITAT. Bahamas.

This species is nearly allied to *V. noveboracensis*, but differs from it in being slightly larger, and in having the entire underparts an almost uniform color—pale yellow, or yellowish white.

Vireo noveboracensis (GMEL.).

Muscicapa noveboracensis GMEL. Syst. Nat. I, p. 947 (1788).

Vireo noveboracensis GUNDL. J. f. O. 1855, p. 469 (Cuba); *ib.* 1861, p. 404 (Cuba); *ib.* 1872, p. 484 (Cuba).—BREWER, Pr. Bost. Soc. Nat. Hist. VII, p. 307 (1860) (Cuba).—GADOW, Cat. Bds. Brit. Mus. VII, p. 300 (1883).—CORY, List Bds. W. I. p. 10 (1885).

Vireo (*Lanivireo*) *noveboracensis* GUNDL. J. f. O. 1861, p. 324 (Cuba).

Accidental in Cuba.

Vireo gundlachi LEMB.

Vireo gundlachi LEMB. Aves Cuba, p. 29 (1850).—CAB. J. f. O. 1855, p. 468.—BREWER, Pr. Bost. Soc. Nat. Hist. VII, p. 307 (1860).—GUNDL. Repert. Fisico-Nat. Cuba, I, p. 228 (1865).—SCL. & SALV. Nom. Avium Neotr. p. 12 (1873).—GADOW, Cat. Bds. Brit. Mus. VIII, p. 304 (1883).—CORY, List Bds. W. I. p. 10 (1885).

Vireonella gundlachi BAIRD, Rev. Am. Bds. p. 369 (1864).—GRAY, Handl. Bds. I, p. 382 (1869).—BD. BWR. & RIDGW. Hist. N. Am. Bds. I, p. 382 (1874).

SP. CHAR.—Wings short and rounded; upper plumage grayish olive; lores and circle around the eye yellowish; underparts dull yellow; two narrow wing-bands; wings and tail brown edged with grayish olive, pale on the secondaries; quills narrowly edged on inner webs with dull white; bill dull horn color.

Length (skin), 5; wing, 2.15; tail, 2.10; tarsus, .78; bill. .43.

HABITAT. Cuba.

Vireo flavifrons VIEILL.

Vireo flavifrons VIEILL. Ois. Am. Sept. I, p. 85 (1807).—GUNDL. J. f. O. 1855, p. 468 (Cuba); *ib.* 1861, p. 404 (Cuba); *ib.* 1872, p. 403 (Cuba) —BREWER, Pr. Bost. Soc. Nat Hist. VII, p. 307 (1860) (Cuba).—CORY, List Bds. W. I. p. 10 (1885).

Accidental in Cuba.

Vireo calidris (LINN.).

Motacilla calidris LINN. Syst. Nat. I, p. 329 (1766).

Vireosylvia olivacea GOSSE, Bds. Jam. p. 194 (1847).

Vireo altiloquus GAMB. Pr. Acad. Nat. Sci Phila. 1848, p. 127.—BAIRD, Bds. N. Am. p. 354 (1858).

Vireosylvia altiloqua CASSIN, Pr. Acad. Nat. Sci. Phila. 1851, p. 152; *ib.* Pr. Acad. Nat. Sci. Phila. 1860, p. 375.—NEWTON, Ibis, 1859, p. 145. —ALBRECHT, J. f. O. 1862, p. 195.—SCL. & SALV. P. Z. S. 1864, p. 348.

Vireo altiloqua SALLÉ, P. Z. S. 1857, p. 231.

Vireosylvia calidris BAIRD, Rev. Am. Bds. p. 329 (1864).—SCL. & SALV. P. Z. S. 1875, p. 234.—LAWR. Pr. U. S. Nat. Mus. I, p. 233 (1878).—A. & E. NEWTON, Handb. Jamaica, p. 106 (1881).

Vireo calidris BRYANT, Pr. Bost. Soc. Nat. Hist. XI, p. 93 (1866).—SALV. & GODM. Biol. Centr. Amer. Aves, p. 186 (1881).—GADOW, Cat. Bds. Brit. Mus. VIII, p. 293 (1883).—CORY, Bds. Haiti & San Domingo, p. 49 (1885); *ib.* List Bds. W. I. p. 10 (1885).

Phyllomanes calidris GUNDL. Anal. Soc. Esp. Hist. Nat. VII, p. 168 (1878); *ib.* J. f. O. 1878, p. 158.

Vireosylvia calidris var. *dominicana* LAWR. Pr. U. S. Nat. Mus. I, p. 55 (1878).

SP. CHAR. *Male:*—Crown grayish, but showing a slight olive tinge; upper parts dull olive green; a buff superciliary line and a dusky stripe through the eye; a narrow dusky maxillary line half way down the sides of the throat; sides pale yellowish-olive; lining of wings and under tail-coverts pale yellow; tail olive.

The sexes are similar.

Length, 5.80; wing, 3.20; tail, 2.50; tarsus, .68; bill, .60.

HABITAT. Jamaica, San Domingo, and Antilles.

Vireo calidris barbatula.

Vireo gilvus D'ORB. in La Sagra's Hist. Nat. Cuba, Ois. p. 43 (1840) (?)
Phyllomanes barbatulus CAB. J. f. O. 1855, p. 467 (Cuba); *ib.* GUNDL. 1861, p. 324 (Cuba); *ib.* 1872, p. 401 (Cuba).—BREWER, Pr. Bost. Soc. Nat. Hist. VII, p. 307 (1860) (Cuba).
Vireo olivaceus THIENEM. J. f. O. 1857, p. 147 (Cuba)?
Vireosylvia altiloqua BRYANT, Pr. Bost. Soc. Nat. Hist. VII, p. 113 (1859) (Bahamas).—ALBREGHT, J. f. O. 1861, p. 206 (Cuba).
Vireo calidris var. *barbatulus* BD. BWR. & RIDGW. Hist. N. Am. Bds. I, p. 36 (1874).
Vireo altiloquus var. *barbatulus* CORY, Bds. Bahama I. p. 82 (1880).
Vireo calidris barbatula CORY, List Bds. W. I. p. 10 (1885).

The North American variety of *V. calidris* occurs in the Bahama Islands, and is recorded from Cuba.

Vireo olivaceus (LINN.).

Muscicapa olivacea LINN. Syst. Nat. I, p. 327 (1766).
Vireo olivaceus BREWER, Pr. Bost. Soc. Nat. Hist. VII, p. 387 (1860) (Cuba).
Phyllomanes olivaceus GUNDL. J. f. O. 1872, p. 403 (Cuba); *ib.* 1878, p. 158 (Porto Rico); *ib.* Anal. Soc. Esp. Hist. Nat. VII, p. 169 (1878) (Porto Rico).
Vireo olivacea CORY, List Bds. W. I. p. 10 (1885).

V. olivaceus is claimed to have occurred in Cuba and Porto Rico.

Vireo solitarius (WILS.).

Muscicapa solitaria WILS. Am. Orn. II, p. 43 (1810).
Vireo solitarius GUNDL. J. f. O. 1854, p. 468 (Cuba); *ib.* 1872, p. 403 (Cuba).—BREWER, Pr. Bost. Soc. Nat. Hist. VII, p. 307 (1860) (Cuba).—CORY, List Bds. W. I. p. 10 (1885).
Vireo (Lanivireo) solitarius GUNDL. J. f. O. 1861, p. 324 (Cuba).

Accidental in Cuba.

GENUS Laletes SCL.

Laletes SCLATER, P. Z. S. 1861, p. 72.

Laletes osburni SCL.

Laletes osburni SCL. P. Z. S. 1861, p. 72, pl. 14.—ALBRECHT, J. f. O. 1862, p. 195.—SCL. & SALV. Nom. Avium Neotr. p. 12 (1873).—A. & E.

NEWTON, Handb. Jamaica, p. 106 (1881).—GADOW, Cat. Bds. Brit. Mus. VIII, p. 313 (1883).—CORY, List Bds. W. I. p. 10 (1885).

Laletes osburnii BAIRD, Rev. Am. Bds. p. 383 (1864).—GRAY, Handl. Bds. I, p. 384 (1869.)

SP. CHAR. *Male:*—Top of head grayish olive, becoming olive green on the back; underparts dull greenish yellow; wings and tail pale brown, narrowly edged with olive; under wing-coverts yellowish white.

Length (skin), 5.25; wing, 3; tail, 2.50; tarsus, .75.

HABITAT. Jamaica.

FAMILY AMPELIDÆ.

GENUS **Dulus** VIEILL.

Dulus VIEILLOT, Analyse, p. 42, No. 131, 1816.

Dulus dominicus (LINN.).

Tanagra dominica LINN. Syst. Nat. I, p. 316 (1766).—GMEL. Syst. Nat. I, p. 894 (1788).

Dulus palmarum "VIEILL. Nouv. Dict. X, p. 438 (1817)."—BP. Consp. I, p. 331 (1850).

Dulus dominicus STRICKL. Contr. Orn. p. 103 (1851).—SALLÉ, P. Z. S. 1857, p. 231.—BAIRD, Rev. Am. Bds. p. 403 (1864).—BRYANT, Pr. Bost Soc. Nat. Hist. XI, p. 92 (1866).—GRAY, Handl. Bds. I, p. 365 (1869).—SCL. & SALV. Nom. Avium Neotr. p. 13 (1873).—CORY, Bull. Nutt. Orn. Club, VI, p. 152 (1881); *ib.* Bds. Haiti & San Domingo, p. 51 (1885); *ib.* List Bds. W. I. p. 11 (1885).—SHARPE, Cat. Bds. Brit. Mus. X, p. 218 (1885).

SP. CHAR. *Male:*—Above dull olive brown; throat dull white; feathers of the throat and underparts dark brown in the centre, broadly edged with dull rufous white, giving the bird a heavily streaked appearance; rump green; primaries and secondaries dark brown, the outer webs edged with green, the inner webs becoming very pale on the edges; tail dark brown, the feathers very narrrowly edged with green; iris orange.

The sexes are similar.

Length, 6.20; wing, 3.50; tail, 3.10; tarsus, .80; bill, .55.

HABITAT. Haiti and San Domingo.

Dulus nuchalis SWAINS.

Dulus nuchalis SWAINS. Anim. in Menag. p. 345 (1837); *ib.* Classif. Bds. II, p. 238 (1837).—STRICKL. Contr. Orn. p. 104 (1851).—BAIRD,

Rev. Am. Bds. I, p. 403 (1864).—SCL. & SALV. Nom. Avium Neotr. p. 13 (1873).—BOUC. Cat. Avium, p. 224 (1876).—CORY, List Bds. W. I. p. 11 (1885).—SHARPE, Cat. Bds. Brit. Mus. X, p. 219 (1885).

This species? is described as somewhat smaller than *Dulus dominicus*, and showing a white patch on the nape; it is otherwise similar. The exact habitat is unknown.

HABITAT. "Antilles."

GENUS **Ampelis** LINN.

Ampelis LINN. Syst. Nat. I, p. 297 (1766).

Ampelis cedrorum (VIEILL.).

Ampelis garrulus var. β. LINN. Syst. Nat. I, p. 297 (1766).

Bombycilla cedrorum VIEILL. Ois. Am. Sept. I, p. 88 (1807).—CAB. J. f. O. 1856, p. 3 (Cuba); *ib.* 1859, p. 350; GUNDL. J. f. O. 1861, p. 328 (Cuba).

Ampelis carolinensis GOSSE, Bds. Jam. p. 197 (1847).—ALBRECHT, J. f. O. 1862, p. 202 (Jamaica).

Bombycilla carolinensis BREWER, Pr. Bost. Soc. Nat. Hist. VII, p. 307 (1860) (Cuba).

Ampelis cedrorum MARCH, Pr. Acad. Nat. Sci. Phila. 1863, p. 294 (Jamaica).—GUNDL. Repert. Fisico-Nat. Cuba, I, p. 240 (1865); *ib.* J. f. O. 1872, p. 430 (Cuba).—A. & E. NEWTON, Handb. Jamaica, p. 107 (1881).—CORY, List Bds. W. I. p. 11 (1885).

Recorded from Cuba and Jamaica.

FAMILY TANAGRIDÆ.

GENUS **Euphonia** DESM.

Euphonia DESMAREST, Hist. Nat. des Tanagras, etc. p. 19 (1805).

Euphonia musica (GMEL.).

L'Organiste de S. Dominge. "BUFF. Pl. Enl. 809, fig. 1."

Pipra musica GMEL. Syst. Nat. I, p. 1004 (1788).

Tanagra musica "VIEILL. Enc. Meth. p. 787."

Euphonia musica GRAY, Gen. Bds. I, p. 367 (1846).—BP. Consp. I, p. 232 (1850).—SALLÉ, P. Z. S. 1857, p. 231.—BRYANT, Pr. Bost. Soc. Nat. Hist. XI, p. 92 (1866).—SCL. & SALV. Nom. Avium Neotr. p. 17 (1873).—CORY, Bull. Nutt. Orn. Club, VI, p. 152 (1881); *ib.* Bds.

Haiti & San Domingo, p. 61 (1885); *ib.* List Bds. W. I. p. 11 (1885). —TRISTRAM, Ibis, 1884, p. 168.

Euphone musica LEMB. Aves Cuba, p. 42 (1850)?

Euphona musica GUNDL. J. f. O. 1855, p. 476.

SP. CHAR. *Male:*—Crown light blue, the color extending upon the nape, and slightly upon the sides of the neck; forehead, underparts, and rump brownish-orange; throat, cheeks, back, and tail bluish black, showing purple reflections, the purple very prominent on the back; a line of purplish black separating the blue and orange of the head and forehead; primaries dark brown, becoming pale on the edges of the inner webs; bill and feet black.

Female:—Underparts yellowish green, becoming yellowish on the throat; cheeks and line above the forehead dull black; head and nape, extending upon the sides of the neck, light blue; forehead orange brown; back, rump, and wing-coverts olive green; tail dull black, showing a tinge of green upon the feathers; primaries as in the male, except showing an almost indistinct greenish edging upon the outer webs.

Immature Male:—Forehead pale orange; top of the head grayish blue; back olive green, blotched with dark blue; rump brownish orange; wings and tail black, some of the tertiaries and coverts edged with olive green; underparts olive green, marked with brownish on the throat; dark orange, shaded with greenish, on the belly and crissum; bill and feet black.

Length, 4.40; wing, 2.60; tail, 1.80; tarsus, .50; bill, .25.

HABITAT. Haiti and San Domingo. No species of *Euphonia* has as yet been taken in Cuba.

Euphonia flavifrons (SPARRM.).

Emberiza flavifrons SPARRM. Mus. Carls. IV, No. 92 (♀).

Tanagra flavifrons LATH. Ind. Orn. Suppl. p. 47 (♀). — VIEILL. Enc. Méth. p. 775.

Euphone organiste DESM. Hist. Nat. Tan. pls. 19, 20 (1805).—VIEILL. Gal. Ois. Suppl. pl. s. n. (♂ & ♀).

Cyanophonia musica BP. Rev. Zool. 1851, p. 138.

Euphonia flavifrons SCL. P. Z. S. 1856, p. 271; SUNDEV. Oefv. K. Vet. Akad. Förh. 1869, p. 583.—SCL. & SALV. Nom. Avium Neotr. p. 17 (1873).—LAWR. Pr. U. S. Nat. Mus. I, pp. 56, 190, 269, 354, 455 (1878).—ALLEN, Bull. Nutt. Orn. Club, V, p. 166 (1880.)—CORY, List Bds. W. I. p. 11 (1885).

SP. CHAR. *Male:*—Top of head bright blue, extending to the nape; forehead bright yellow, separated from the blue by a bluish black line; back green, shading into yellow on the rump; underparts

yellowish green; cheeks bluish black; outer webs of primaries narrowly edged with green, wanting on the first; bill dark.

Female:—Similar to the male but paler in coloration, cheek-marking dark olive and much less distinct.

Length, 4.20; wing, 2.30; tail, 1.40.

HABITAT. St. Bartholemew, Martinique, Guadeloupe, Dominica, St. Vincent, Grenada, and St. Lucia.

Euphonia jamaica (LINN.).

Fringilla jamaica LINN. Syst. Nat. I, p. 323 (1766).

Euphonia jamaica GOSSE, Bds. Jam. p. 238 (1847).—BP. Consp. I, p. 233 (1850).—ALBRECHT, J. f. O. 1862, p. 196.—SCL. Cat. Am. Bds. p. 60 (1862).—MARCH, Pr. Acad. Nat. Sci. Phila. 1863, p. 296.—SCL. & SALV. Nom. Avium Neotr. p. 18 (1873).—A. & E. NEWTON, Handb. Jamaica, p. 104 (1881).—CORY, List Bds. W. I. p. 11 (1885).

Pyrrhuphonia jamaica BP. Rev. Zool. 1851, p. 157.—GRAY, Handl. Bds. II, p. 79 (1870).

Euphonia jamaicensis SCL. P. Z. S. 1856, p. 280; *ib.* 1861, p. 73.

SP. CHAR. *Male:*—Above slaty blue; throat and breast gray; belly, abdomen, and flanks showing bright yellow; crissum dull white; lining of wing whitish, showing yellow on the axillaries.

Female:—Head and neck bluish gray; back yellowish green; wings showing yellowish green on the outer webs; under surface dull gray; a faint greenish tinge on the flanks.

Length, 4.30; wing, 2.50; tail, 1.45.

HABITAT. Jamaica.

Euphonia sclateri BP.

Euphonia sclaterii "BP. Mus. Par."

Euphonia sclateri SUNDEV. Oefv. K. Vet. Akad. Förh. 1869, p. 596.—GRAY, Handl. Bds. II, p. 77 (1870).—SCL. & SALV. Nom. Avium Neotr. p. 17 (1873).—BOUC. Cat. Avium, p. 240 (1876).—GUNDL. J. f. O. 1874, p. 311; *ib.* 1878, p. 159; *ib.* Anal. Soc. Esp. Hist. Nat. VII, p. 191 (1878).—CORY, List Bds. W. I. p. 11 (1885).

SP. CHAR. *Male:*—Forehead dull orange yellow, bordered by a narrow band of dark blue, succeeded by light blue, which color covers the entire top of the head to the nape; cheeks and ear-coverts very dark blue, almost black; wings and tail black with bluish reflections; back bluish black, distinctly blue when held in the light; rump yellow, showing a faint brownish tinge; throat yellow; breast and rest of underparts dull orange yellow, showing a slight brownish tinge on the crissum.

Length (skin), 4; wing, 2.35; tail, 1.65; tarsus, 58; bill, .25.

HABITAT. Porto Rico.

GENUS **Calliste** BOIE.

Calliste BOIE, Isis, 1826, p. 978.

Calliste cucullata (SWAINS.).

Aglaia cucullata SWAINS. Orn. Dr. pl. 7.

Calliste cucullata GRAY, Gen. Bds. p. 366, sp. 9 (1844-46).—BP. Consp. I, p. 234 (1850); *ib.* Rev. Mag. Zool. 1851, p. 140.—SCL. Contr. Orn. 1851, p. 63; *ib.* P. Z. S. 1856, p. 253; *ib.* Mon. Call. p. 45, pl. xx (1857).—BURM. Syst. Ueb. III, p. 183.—GRAY, Handl. Bds. II, p. 68 (1870).—SCL. & SALV. Nom. Avium Neotr. p. 19 (1873).—CORY, List Bds. W. I. Revised ed. p. 11 (1886).

Calliste versicolor LAWR. Ann. N. Y Acad. Sci. I, p. 153 (1878); *ib.* Pr. U. S. Nat. Mus. I, pp. 190, 487 (1878).—CORY, List Bds. W. I. p. 11 (1885).

SP. CHAR. *Male:*—Top of the head deep chestnut red; upper plumage golden fawn color; lores black; sides of the head and ear-coverts dark green; tail black, except the two middle-feathers, which are bluish green, the rest of tail-feathers and quills black, edged with bluish green; upper tail-coverts bluish green; underparts pale bluish lilac when held in the light; feathers of the upper throat tipped with gray; under tail-coverts cinnamon.

Female:—Top of the head lighter chestnut than in the male; rest of upper parts pale green; underparts as in the male, but paler; under tail-coverts, abdomen, and flanks pale cinnamon.

Length, 6; wing, 3.30; tail, 2.50

HABITAT. St. Vincent.

GENUS **Spindalis** JARD.

Spindalis "JARD & SELBY. Ill. Orn. U. S. 1836."

Spindalis zena (LINN.).

Fringilla bahamensis BRISS. Orn. III, p. 168.

Fringilla zena LINN. Syst. Nat. I, p. 320 (1766).

Tanagra zena BRYANT, Pr. Bost. Soc. Nat. Hist. VII, p. 111 (1859).

Spindalis zena SCL. P. Z. S. 1856, p. 321.—SCL. & SALV Nom. Avium Neotr. p. 21 (1873).—BOUC. Cat. Avium, p. 244 (1876).—CORY, Bds. Bahama I. p. 92 (1880); *ib.* List Bds. W. I. p. 11 (1885).

"*Spindalis pretrei* GRAY, Handl. Bds. II, p. 63 (1870)."

SP. CHAR. *Male:*—Above black; rump, and a broad band over the nape from side of the neck rufous brown, shading into an orange tinge; a superciliary stripe, and a stripe on the sides of the throat from lower mandible and chin white; cheeks black; throat black, shading into brown upon the breast, with a yellow stripe passing from the chin nearly to the brown of the breast; breast deep yellow,

shading into brown as it nears the throat; belly white, with an olive tint upon the flanks; wings and tail black, edged with white; the tertials, coverts, and base of primaries heavily marked with white; bill black, under mandible bluish; legs black.

Female:—Above olive green; below paler, shading into white on the belly; the sides and flanks pale olive green; the stripe over the eye but faintly indicated, and of an ashy color; wings and tail dark brown, with an olive tinge on the feathers, showing markings of dull white as in the male, but much narrower,

Length, 5.95; wing, 3; tail, 2.50; tarsus, .80; bill, .50.

HABITAT. Bahamas.

Spindalis pretrei (LESS.).

Tanagra pretrei LESS. Rev. Zool. 1839, p. 102.—GRAY, Gen. Bds. I, p. 365 (1846).

Tanagra multicolor et *Tanagra zena* D'ORB. in La Sagra's Hist. Nat. Cuba, Ois. p. 74 (1840).

"*Spindalis zena* et *pretrei* BP. Consp. I, p. 248 (1850.)

Spindalis pretrei CAB. J. f. O. 1855, p. 476.—BREWER, Pr. Bost. Soc. Nat. Hist. VII, p. 307 (1860).—GUNDL. Repert. Fisico-Nat. Cuba, I, p. 237 (1865); *ib.* J. f. O. 1872, p. 419.

Spindalis zena GRAY, Handl. Bds. II, p. 63 (1870).

Spindalis pretrii SCL. & SALV. Nom. Avium Neotr. p. 21 (1873).—BOUC. Cat. Avium, p. 244 (1876).—CORY, List Bds. W. I. p. 11 (1885); *ib.* Revised List Bds. W. I. p. 11 (1886).

SP. CHAR. *Male:*—Head black; a superciliary stripe reaching to the nape, and a stripe reaching from the base of the under mandible down the sides of the throat white; a narrow patch of white on the chin; throat yellow, separated from the white stripe by black; chest and cape chestnut, joining on the sides; back yellowish olive; rump chestnut; underparts grayish white, showing a yellow line down the middle of the belly; wings and tail black, the feathers marked with white; wing-coverts heavily marked with white; a broad patch of chestnut on the carpus; bill and feet dark.

Female:—The black on the head of the male, replaced by dull green; sides of the throat grayish; rump slightly tinged with yellowish; underparts olive gray, palest on the belly.

Length ♂ (skin), 5.60; wing, 3; tail, 2.25.

HABITAT. Cuba.

Spindalis multicolor (VIEILL.).

Tanagra multicolor VIEILL. Enc. Méth. p. 776.

Spindalis multicolor BP. Consp. I, p. 240 (1850).—SALLÉ, P. Z. S. 1857, p. 231.—GRAY, Handl. Bds. II. p. 63 (1870).—SCL. & SALV. Nom.

Avium Neotr. p. 21 (1873).—BOUC. Cat. Avium, p. 244 (1876).—CORY, Bull. Nutt. Orn. Club, VI, p. 152 (1881); *ib.* Bds. Haiti & San Domingo, p. 54 (1885); *ib.* List Bds. W. I. p. 11 (1885).

Tanagra (*Shizampelis*) *dominicensis* BRYANT, Pr. Bost. Soc. Nat. Hist. XI, p. 92 (1866).

SP. CHAR. *Male:*—Head black; a superciliary stripe from the forehead to the nape; a broad stripe of black from the bill, through the eye, to the neck; chin white, the white extending in a stripe below the black of the cheek to the neck; rest of throat black, with a yellow stripe in the centre, reaching the white of the chin; breast chestnut, shading into yellow upon the underparts and sides; a collar of bright orange yellow upon the nape, joining the white stripe of the throat; back olive; rump chestnut; abdomen and crissum white; tail brownish black, the inner webs of the two outer tail-feathers broadly marked with white; wings dark brown, with white edgings to the coverts and secondaries; lesser wing-coverts chestnut; bill and feet bluish black.

The female is dull colored; olive on the back and yellowish on the rump; underparts grayish, whitening at the vent.

Length, 6.40; wing, 3.35; tail, 3.30; tarsus, .75; bill, .40.

HABITAT. Haiti and San Domingo.

Spindalis portoricensis (BRYANT).

Tanagra (*Spindalis*) *portoricensis* BRYANT, Pr. Bost. Soc. Nat. Hist. X, p. 252 (1866).—SUNDEV. Oefv. K. Vet. Akad. Förh. 1869, p. 596.

Spizampelis portoricensis GRAY, Handl. Bds. II, p. 63 (1870).

Spindalis portoricensis SCL. & SALV. Nom. Avium Neotr. p. 21 (1873).—BOUC. Cat. Avium, p. 244 (1876).—GUNDL. Anal. Soc. Esp. Hist. Nat. VII, p. 188 (1878).—CORY, List Bds. W. I. p. 11 (1885).

Pyrrhulagra portoricensis GUNDL. J. f. O. 1874, p. 312.

SP. CHAR. *Male:*—Head black; a white superciliary stripe from the nostril to the nape; a white stripe passing down the sides of the throat; a yellow stripe from the chin to the breast, where it becomes orange chestnut, separated from the white of the cheek by a black patch, which nearly reaches the bill; a narrow cape of orange chestnut; breast yellow, becoming dull white on the abdomen; back green; wing-coverts showing a patch of chestnut at the carpus; rump and flanks yellowish green.

Female:—Top of head dull olive green, shading into yellowish green on the back, brightest on the nape and rump; underparts ashy, showing dull yellow on the breast; whole under surface indistinctly striped with pale brown.

Length, 6.50; wing, 3.50; tail, 2.50.

HABITAT. Porto Rico.

Spindalis nigricephala (JAMESON).

Tanagra nigricephala JAMESON, Ed. N. Phil. Journ. XIX, p. 213.—GOSSE, Ill. Bds. Jam. pl. 56.
Spindalis bilineatus JARD. & SELB. Ill. Orn. s. n. pl. 9.
Tanagra zena GOSSE, Bds. Jam. p. 231 (1847).
Tanagra zenoides DES MURS, Icon. Orn. pl. 40.
Spindalis nigricephala BP. Consp. I, p. 240 (1850).—SCL. P. Z. S. 1856, p. 230; *ib.* 1861, p. 74; *ib.* Cat. Am. Bds. p. 77 (1862).—ALBRECHT, J. f. O. 1862, p. 196.—MARCH, Pr. Acad. Nat. Sci. Phila. 1863, p. 296.—GRAY, Handl. Bds. II, p. 63 (1870).—SCL. & SALV. Nom. Avium Neotr. p. 21 (1873).—BOUC. Cat. Avium, p. 244 (1876).—A. & E. NEWTON, Handb. Jamaica, p. 104 (1881).—CORY, List Bds. W. I. p. 11 (1885).

SP. CHAR. *Male:*—Head black; a superciliary stripe reaching from the bill to the nape, white; a stripe of white passes down the sides of the throat; chin white, not reaching the orange of the breast; back yellowish green; the central portion of the breast bright orange; rest of underparts greenish yellow, sometimes orange yellow, quills and tail black; most of the primaries, secondaries, and coverts edged with white.

Female:—Top of the head dark olive; light olive green on the back; yellowish green on the rump and upper tail-coverts; throat and cheeks gray; underparts washed with orange yellow, commencing at the upper breast and brightest on the breast and belly; sides and flanks olive green.

Length, 7; wing, 4; tail, 3.

HABITAT. Jamaica.

GENUS **Piranga** VIEILL.

Piranga VIEILLOT, Ois. Am. Sept. I. p. iv (1807); *ib.* Analyse, p. 32 (1816).

Piranga rubra (LINN.).

Fringilla rubra LINN. Syst. Nat. I, p. 181 (1758).
Muscicapa rubra LINN. Syst. Nat. I, p. 326 (1766).
Tanagra æstiva GMEL. Syst. Nat. I, p. 889 (1788).
Pyranga æstiva D'ORB. La Sagra's Hist. Nat. Cuba, Ois. p. 76 (1840).—BREWER, Pr. Bost. Soc. Nat. Hist. VII, p. 307 (1860) (Cuba).—GUNDL. Repert. Fisico-Nat. Cuba, I, p. 237 (1865); *ib.* J. f. O. 1872, p. 421 (Cuba).—CORY, List Bds. W. I. p. 11 (1885).
Phœnicosoma æstiva GUNDL. J. f. O. 1855, p. 477.

Accidental in Cuba and the Bahama Islands.

Piranga erythromelas VIEILL.

Tanagra rubra LINN. Syst. Nat. I, p. 314 (1766).
Piranga erythromelas VIEILL. Nouv. Dict. XXVIII, p. 293 (1819).
Pyranga rubra D'ORB. in La Sagra's Hist. Nat. Cuba, Ois. p. 78 (1840).—GOSSE, Bds. Jam. p. 235 (1847).—BREWER, Pr. Bost. Soc. Nat. Hist. VII, p. 307 (1860) (Cuba).—ALBRECHT, J. f. O. 1862, p. 197 (Jamaica).—MARCH, Pr. Acad. Nat. Sci. Phila. 1863, p. 296 (Jamaica).—GUNDL. Repert. Fisico-Nat. Cuba, I, p. 238 (1865).—A. & E. NEWTON, Handb. Jamaica, p. 104 (1881).—CORY, List Bds. W. I. p. 11 (1885).
Phœnicosoma rubra GUNDL. J. f. O. 1855, p. 477 (Cuba).

Cuba and Jamaica; it has also been taken in the Barbadoes, a specimen so labelled being in the U. S. National Museum.

GENUS **Nesospingus** SCL.

Nesospingus SCLATER, Ibis, 1885, p. 273.

Nesospingus speculiferus (LAWR.).

Chlorospingus speculiferus LAWR. Ibis, 1875, p. 383, pl. 9.—BOUC. Cat. Avium, p. 246 (1876).—GUNDL. J. f. O. 1878, p. 159; *ib.* 1882, p. 161; *ib.* Anal. Soc. Esp. Hist. Nat. VII, p. 190 (1878).—CORY, List Bds. W. I. p. 11 (1885).
Nesospingus speculiferus SCL. Ibis, 1885, p. 273.

SP. CHAR. *Male:*—"Entire upper plumage and sides of the head olive brown; the feathers of the crown have their centres dark brown with their margins grayish; the two central tail-feathers are coloured like the back, the others are light reddish brown and are closely crossed with nearly obsolete darker bars; quill-feathers dark brown, first, edged with gray on the outer primaries, the outer webs of the fourth, fifth, and sixth primaries are marked near their bases with white, partly concealed by the wing-coverts, the portion beyond the coverts appearing as a small triangular spot; the under plumage is grayish white, and has a somewhat mottled appearance, owing to the darker bases of the feathers showing a little; the sides are dusky, with a tinge of rufous; under tail-coverts light rufous, with dusky centres; upper mandible dark brown, the under, pale brownish white; tarsi and toes brownish black. Length, 6½ inches; wing, 3¼; tail, 2¾; bill, ⅝; tarsus, ⅞." (LAWR. l. c., orig. descr.)

HABITAT. Porto Rico.

GENUS **Phœnicophilus** STRICKL.

Phœnicophilus "STRICKLAND, Contr. Orn. p. 104, 1861."

Phœnicophilus palmarum (LINN.).

Turdus palmarum LINN. Syst. Nat. I, p. 295 (1766).
Tachyphonus palmarum "VIEILL. N. D. d'H. N. XXXII, p. 359."
Arremon palmarum GRAY, Gen. Bds. Suppl. p. 16.—BRYANT, Pr. Bost. Soc. Nat. Hist. XI, p. 92 (1866).
Dulus palmarum "BP. R. Z. 1851, p. 78."
Dulus poliocephalus "BP. R. Z. 1851, p. 78."
Phœnicophilus palmarum STRICKL. Contr. Orn. p. 104 (1851).—SCL. P. Z. S. 1856, p. 84.—GRAY, Handl. Bds. II, p. 72 (1870).—SCL. & SALV. Nom. Avium Neotr. p. 25 (1873).—CORY, Bull. Nutt. Orn. Club, VI, p. 152 (1881); *ib.* Bds. Haiti & San Domingo, p. 56 (1885); *ib.* List Bds. W. I. p. 12 (1885).—TRISTRAM, Ibis, 1884, p. 168.
Phœnicophilus palmarum BOUC. Cat. Avium, p. 247 (1876).

SP. CHAR. *Male:*—Top of the head and cheeks black; a spot of white on each side of the forehead; a white stripe touching the upper eyelid, commencing at the centre of the eye, passing backward on the head; a patch of white on the lower eyelid; a gray collar on the nape, extending upon, and joining the gray of the sides; sides slaty gray; throat white, the white extending in a narrow line down the middle of belly to the vent; the back, rump, tail, outer webs of secondaries and coverts bright yellowish green; quills brown; bill and feet bluish black.

The sexes are similar.

Length, 6.70; wing, 3.70; tail, 3; tarsus, .85; bill, .70.

HABITAT. Haiti and San Domingo.

Phœnicophilus dominicensis CORY.

Phœnicophilus dominicensis CORY, Bull. Nutt. Orn. Club, VI, p. 129 (1881); *ib.* Bds. Haiti and San Domingo, p. 58 (1885); *ib.* List Bds. W. I. p. 12 (1885).

SP. CHAR. *Male:*—Forehead and sides of the head black; a spot of white above and below the eye, and on each side of the forehead; chin white, extending in two stripes down the sides of the throat to the breast, bordering the black of the head; the rest of the head, neck and underparts grayish plumbeous; back, wing-coverts, tail and coverts, and outer edges of wing-feathers bright yellowish green; inner webs of primaries and secondaries brown, pale on the edges; legs and lower mandible dark slate color; upper mandible black; iris reddish brown.

The sexes are similar.

Length, 6.80; wing, 3.50; tail, 2.30; tarsus, .82; bill, .68.

HABITAT. San Domingo.

GENUS **Calyptophilus** CORY.

Calyptophilus CORY, Auk, I, p. 1 (1884).

Calyptophilus frugivorus CORY.

Phœnicophilus frugivorus CORY, Journ. Bost. Zool. Soc. II, No. 4, p. 45 (1883).

Calyptophilus frugivorus CORY, Auk, I, p. 3 (1884); *ib.* Bds. Haiti and San Domingo, p. 59 (1885); *ib.* List Bds. W. I. p. 12 (1885).

SP. CHAR. *Male:*—Top of the head brown, shading into ashy on the neck behind the eye; rest of upper parts, including back and upper surface of wings and tail, brownish olive; throat white; breast white, becoming ashy upon the sides; flanks brownish olive, the olive mixing with white upon the crissum; primaries and secondaries olive brown, the inner webs edged with very pale brown; a patch of bright yellow under the base of the wing, extending upon the carpus; eye encircled by a very narrow line of bright yellow, and a spot of yellow in front of the eye, at the base of the mandible; upper mandible dark brown; lower mandible yellowish brown, darkest at the base. Some specimens show a spot of yellow upon the middle of the breast, but it is not constant. In a series of fourteen specimens, it is wanting in all but five.

The female is perhaps somewhat duller, and some specimens appear slightly smaller, but otherwise resembles the male.

Length, 7.50; wing, 3.70; tail, 3.70; tarsus, 1; toe, .82; bill, .75.

HABITAT. San Domingo.

GENUS **Saltator** VIEILL.

Saltator VIEILLOT, Analyse, p. 32 (1816).

Saltator guadeloupensis LAFR.

Saltator guadeloupensis LAFR. Rev. Zool. 1844, p. 167.—BP. Consp. I, p. 489 (1850).—SCL. Cat. Am. Bds. p. 97 (1862).—TAYLOR, Ibis, 1864, p. 167.—GRAY, Handl. Bds. II, p. 74 (1870).—SCL. & SALV. Nom. Avium Neotr. p. 26 (1873).—LAWR. Pr. U. S. Nat. Mus. I, pp. 354, 457 (1878).—CORY, List Bds. W. I. p. 12 (1885).

Saltator martinicensis BP. Consp. I, p. 489 (1850).—GRAY, Handl. Bds. II, p. 75 (1870).

SP. CHAR. *Male:*—Head and back bright olive green, shading into gray on the rump; wings showing the outer webs of the primaries and secondaries green, lacking on the first three primaries, or if showing at all, appearing in a form of a narrow pencilled line; the wing-coverts olive green; throat white, showing a dash of dark brown on either side; a whitish superciliary line; cheeks and ear-coverts olive green; breast and underparts dull buffy white, tinged slightly with olive, and showing faint pencilled lines of pale brown; tail blackish; bill black at the base, pale at the tip.

Female:—Similar to the male; the dark brown streak on the sides of the throat lacking in some specimens, brownish olive in others, but apparently always paler than in the male.

Length (skin), 8; wing, 3.75; tail, 3.50; tarsus, .85; bill, .75.

HABITAT. Guadeloupe and Martinique.

GENUS **Guiraca** SWAINS.

Guiraca SWAINSON, Zool. Journ. III, p. 350 (1827).

Guiraca cærulea (LINN.).

Loxia cærulea LINN. Syst. Nat. I, p. 306 (1766).

Coccoborus cæruleus LEMB. Aves Cuba, p. 61 (1850).—CAB. J. f. O. 1856, p. 9 (Cuba).

Guiraca cærulea BREWER, Pr. Bost. Soc. Nat. Hist. VII, p. 307 (1860) (Cuba).—GUNDL. Repert. Fisico-Nat. Cuba, I, p. 285 (1866); *ib.* J. f. O. 1874, p. 126 (Cuba).—CORY, List. Bds. W. I. p. 12 (1885).

Recorded from Cuba.

GENUS **Habia** REICH.

Habia REICH. Av. Syst. Nat. 1850, pl. xxviii.

Habia ludoviciana (LINN.).

Loxia ludoviciana LINN. Syst. Nat. I, p. 306 (1766).

Guiraca ludoviciana GOSSE, Bds. Jam. p. 259 (1847).—BREWER, Pr. Bost. Soc. Nat. Hist. VII, p. 307 (1860) (Cuba).—ALBRECHT, J. f. O. 1862, p. 196 (Jamaica).—A. & E. NEWTON, Handb. Jamaica, p. 104 (1881).

Coccoborus ludovicianus LEMB. Aves Cuba, p. 59 (1850).

Hedymeles ludoviciana CAB. J. f. O. 1856, p. 9 (Cuba).

Goniaphea ludoviciana GUNDL. Repert. Fisico-Nat. Cuba, I, p. 286 (1866); *ib.* J. f. O. 1874, p. 126 (Cuba).

Habia ludoviciana CORY, List Bds. W. I. p. 12 (1885).

Accidental in Cuba and Jamaica.

Habia melanocephala (Swains.) is recorded from Cuba (*Hedymeles melanocephala* Cabanis, J. f. O. 1856, p. 9). It has no other West Indian record, and has not been cited by later authors.

FAMILY FRINGILLIDÆ.

GENUS **Loxigilla** LESS.

Loxigilla LESSON, Traité, p. 443 (1831).

Loxigilla violacea (LINN.).

Loxia violacea LINN. Syst. Nat. I, p. 306 (1766).
Pyrrhula violacea GOSSE, Bds. Jam. p. 254 (1847).
Pyrrhula robinsonii GOSSE, Bds. Jam. p. 259 (1847).—ALBRECHT, J. f. O. 1862, p. 196.
Pyrrhulagra violacea BP. Consp. I, p. 493 (1850).

Loxigilla violacea SALLÉ, P. Z. S. 1857, p. 231.—ALBRECHT, J. f. O. 1862, p. 196.—SCL. Cat. Am. Bds. p. 102 (1862).—MARCH, Pr. Acad. Nat. Sci. Phila. 1863, p. 297.—GRAY, Handl. Bds. II, p. 104 (1870).—SCL. & SALV. Nom. Avium Neotr. p. 27 (1873).—RIDGW. Pr. U. S. Nat. Mus. I, p. 250 (1878).—CORY, Bds. Bahama I. p. 85 (1880); *ib.* Bull. Nutt. Orn. Club, VI, p. 152 (1881).—A. & E. NEWTON, Handb. Jamaica, p. 104 (1881).—TRISTRAM, Ibis, 1884, p. 168.—CORY, Bds. Haiti & San Domingo, p. 69 (1885); *ib.* List Bds. W. I. p. 12 (1885).
Spermophila violacea BRYANT, Pr. Bost. Soc. Nat. Hist. VII, p. 119 (1859).
Loxia (*Pyrrhulagra*) *violacea* BRYANT, Pr. Bost. Soc. Nat. Hist. XI, p. 93 (1866).
Loxigilla violacea β. *bahamensis* RIDGW. Pr. U. S. Nat. Mus. I, p. 250 (1878).

SP. CHAR. *Male:*—Entire plumage black, showing a slight brownish tinge upon the quills; throat, crissum and crescent over the eye reddish brown; bills and legs black.

Female:—Underparts gray, with a tinge of olive green upon the back; below ash, lightest upon the belly, showing a tinge of olive upon the breast and sides; quills with fine edgings of dull white;

crissum, a crescent over the eye, and markings upon the chin pale reddish brown, much lighter than in the male; under mandible pale.

Immature birds resemble the female.

Length, 5.80; wing, 3; tail, 2.70; tarsus, 90; bill, .50.

HABITAT. Bahamas, Jamaica, Haiti, and San Domingo.

Specimens from different localities often vary in coloration and size, those from Jamaica and San Domingo being somewhat smaller than those from the Bahama Islands. The Jamaica bird differs from the Bahama form, in being somewhat smaller; the red of the throat is lighter, and the under wing-coverts are gray, instead of dull white. It seems to represent a fairly good geographical race. Mr. Ridgway, who first separated them, described the Bahama bird as *L. violacea bahamensis*, but as the type of *L. violacea* came from the Bahamas, the name *bahamensis* becomes a synonym, and the Jamaica form remains as yet unnamed, should it be thought advisable to separate them.

Loxigilla noctis (LINN.).

Fringilla noctis LINN. Syst. Nat. I, p. 320 (1766). —DENNY, P. Z. S. 1847, p. 38.

Pyrrhulagra noctis BP. Consp. I, p. 493 (1850) (excl. syn.).

Loxigilla noctis SCL. Cat. Am. Bds. p. 102 (1862). —TAYLOR, Ibis, 1864, p. 167.—GRAY, Handl. Bds. II, p. 104 (1870).—SCL. & SALV. Nom. Avium Neotr. p. 27 (1873).—SCL. P. Z. S. 1874, p. 175.—LISTER, Ibis, 1880, p. 40.—GRISDALE, Ibis, 1882, p. 486.—CORY, List Bds. W. I. p. 12 (1885).

SP. CHAR. *Male:*—Entire plumage black; superciliary stripe, and throat chestnut-rufous; under tail-coverts rufous; bill and feet black.

Female:—Upper surface dull reddish brown, brightest on the rump; underparts olive brown; wing-coverts heavily edged with rufous; secondaries tinged with the same color; under mandible brown.

Length (skin), 4.50; wing, 2.70; tail, 1.85; tarsus, .75.

HABITAT. Lesser Antilles.

Loxigilla noctis sclateri.

Loxigilla noctis SCL. P. Z. S. 1871, p. 270.

Loxigilla noctis sclateri ALLEN, Bull. Nutt. Orn. Club, V. p. 166 (1880). —CORY, List Bds. W. I. p. 12 (1885).

SP. CHAR. *Male:*—Differs from true *noctis* by having the superciliary line much smaller, almost absent in some specimens, and in lacking the rufous on the under tail-coverts; but the characters are not constant.

HABITAT. Santa Lucia.

Loxigilla anoxantha (GOSSE).

Spermophila anoxantha GOSSE, Bds. Jam. p. 247 (1847).

Loxigilla anoxantha SCL. P. Z. S. 1861, p. 74; *ib.* Cat. Am. Bds. p. 102 (1866).—ALBRECHT, J. f. O. 1862, p. 196.—MARCH, Pr. Acad. Nat. Sci. Phila. 1863, p. 297.—GRAY, Handl. Bds. II, p. 104 (1870).—SCL. & SALV. Nom. Avium Neotr. p. 27 (1873).—A. & E. NEWTON, Handb. Jamaica, p. 104 (1881).—CORY, List Bds. W. I. p. 12 (1885).

SP. CHAR. *Male:*—Head, throat, and underparts dull black; back, rump and wing-coverts having the feathers edged with bright yellow giving a yellowish appearance to the surface; under tail-coverts chestnut; quills and tail dull brown, slightly edged with yellowish.

Female:—Entire upper plumage dull green; throat and breast grayish, with a tinge of olive, becoming pale on the belly.

Length (skin), 4.25; wing, 2.40; tail, 1.40; tarsus, .90.

HABITAT. Jamaica.

Loxigilla portoricensis (DAUD.).

Loxia portoricensis DAUD. Traité D'Orn. II, pl. 29.—SUNDEV. Oefv. K. Vet. Akad. Förh. 1869, p. 597.

Pyrrhula auranticollis VIEILL. Enc. Méth. p. 1028.

Pyrrhulagra portoricensis BP. Consp. I, p. 492 (1850).—GUNDL. Anal. Soc. Esp. Hist. Nat. VII, p. 308 (1878).

Loxia (*Pyrrhulagra*) *portoricensis* BRYANT, Pr. Bost. Soc. Nat. Hist. X, p. 254 (1866).

Loxigilla potoricensis GRAY, Handl. Bds. II, p. 104 (1870).—CORY, List Bds. W. I. p. 12 (1885).

SP. CHAR. *Male:*—A narrow line of black on the forehead; top of the head chestnut rufous, separated at the nape by the black of the back, the black color dividing it like a wedge; throat and under tail-coverts chestnut rufous; rest of plumage black; under wing-coverts dull white; bill and feet black.

Female:—Similar to the male, possibly somewhat duller in coloration.

Length (skin), 7.50; wing, 3.50; tail, 3; tarsus, .95.

HABITAT. Porto Rico.

Loxigilla portoricensis grandis.

Loxigilla portoricensis var. *grandis* LAWR. Pr. U. S. Nat. Mus. IV, p. 204 (1881).
Loxigilla portoricensis grandis CORY, List Bds. W. I. p. 12 (1885).

SP. CHAR. *Male:*—Larger than *Loxigilla portoricensis*, and having the rufous chestnut coloring darker.

Length (skin), 8; wing, 4.25; tail, 3.25; tarsus. 1.

HABITAT. St. Christopher.

Dr. Gundlach records "*Cardinalis virginianus*" (Repert. Fisico-Nat. Cuba, I, p. 397, 1886), as occurring in Cuba. It is possible that the specimen in question was an escaped cage bird, although there is no reason why it should not occasionally occur there, being common in Florida.

GENUS **Melopyrrha** BP.

Melopyrrha BONAPARTE, Compt. Rend. XXXVII, p. 924 (1853).

Melopyrrha nigra (LINN.).

Loxia nigra LINN. Syst. Nat. I, p. 306 (1776).
Pyrrhula crenirostris "VIEILL. Ois. Chant. pl. 77 (1805)."
Pyrrhula nigra VIGORS, Zool. Journ. 1827, p. 440.—VIEILL. Gal. Ois. I, p. 65. pl. 57 (1834).—D'ORB. in La Sagra's Hist. Nat. Cuba, Ois. p. 108 (1840).—GUNDL. Journ. Bost. Soc. Nat. Hist. VII, p. 317 (1851).
Melopyrrha nigra CAB. J. f. O. 1856, p. 8.—BREWER, Pr. Bost. Soc. Nat. Hist. VII, p. 307 (1860).—SCL. Cat. Am. Bds. p. 103 (1862).—GUNDL. Repert. Fisico-Nat. Cuba, I. p. 285 (1865); *ib.* J. f. O. 1874, p. 125.—GRAY, Handl. Bds. II, p. 104 (1870).—SCL. & SALV. Nom. Avium Neotr. p. 28 (1873).—CORY, List Bds. W. I. p. 12 (1885).

SP. CHAR. *Male:*—Upper surface dull black, showing a tinge of bluish when held in the light, brightest on the head; under surface blackish, becoming dusky on the belly; primaries broadly edged with white on the basal half of the inner webs, some of the primaries delicately edged with white, showing distinctly on the fourth and fifth; wing-coverts broadly marked with white; carpus and under wing-coverts white; tail brownish black.

The female is similar to the male but slightly duller in plumage.

Length (skin), 5.75; wing, 2; tail, 2.25; tarsus, .68.

HABITAT. Cuba.

GENUS **Loximitris** BRYANT.

Loximitris BRYANT, Pr. Bost. Soc. Nat. Hist. XI. p. 93 (1866).

Loximitris dominicensis (BRYANT).

Chrysomitris (*Loximitris*) *dominicensis* BRYANT, Pr. Bost. Soc. Nat. Hist. XI, p. 93 (1866).

Chrysomitris dominicensis GRAY, Handl. Bds. II, p. 81 (1870).—CORY, Bull. Nutt. Orn. Club, VI, p. 152 (1881).

Loximitris dominicensis CORY, Bds. Haiti & San Domingo, p. 67 (1885); *ib.* List Bds. W. I. p. 12 (1885).

SP. CHAR. *Male:*—"Bill light brown color, with the top dusky; whole head and throat black; back and scapulars olive; the centre of each feather dusky; upper tail-coverts bright olive yellow; wings with the quills and coverts blackish brown; the smaller coverts with so much of the tips olive as to appear almost wholly of this color; the greater coverts and all the quill-feathers, except the first, bordered externally with the same color, very narrowly on the primaries, and suddenly wider on the secondaries, but only on the posterior half, so that the closed wing presents a distinct blackish bar, running nearly across its centre; tail with the centre feather, outer web of first, and tips of all, blackish brown, the rest bright chrome yellow; beneath yellow, washed with olive on the flanks, and brightest on the crissum." (BRYANT, l. c., orig. descr.).

Immature birds are dull olive, mottled with brownish on the back, and the underparts yellowish white, streaked with pale brown.

Length, 4.10; wing, 2.60; tail, 1.55; tarsus, .53; bill, .38.

HABITAT. San Domingo.

GENUS Pyrrhomitris BONAP.

Pyrrhomitris BONAP. Consp. I, p. 517 (1850).

Pyrrhomitris cucullata (SWAINS.).

Carduelis cucullata SWAINS. Zool. Illust. 1820, pl. 7.

Fringilla cubæ GERVAIS, Mag. Zool. 1835, pl. 44.—CAB. J. f. O. 1856, p. 10 (Cuba); *ib.* 1857, p. 241 (Cuba); *ib.* GUNDL. 1859, p. 295 (Cuba); *ib.* 1861, p. 412 (Cuba); *ib.* 1871, p. 282 (Cuba).

Pyrrhomitris cucullata BP. Consp. I, p. 517 (1850) (Antilles).—GUNDL. Repert. Fisico-Nat. Cuba, I, p. 397 (1766) (Cuba); *ib.* Anal. Soc. Esp. Hist. Nat. VII, p. 207 (1878) (Porto Rico); *ib.* J. f. O. 1878, p. 160 (Porto Rico).

Pyrrhomitris cubæ GRAY, Handl. Bds. II, p. 82 (1870) (Antilles)?

SP. CHAR. *Male:*—Entire head and throat black; back dull reddish orange; rump bright orange red; underparts orange red, whitening at the vent; under tail-coverts pale orange; primaries having the basal half of the outer web pale orange; wings and tail dark brown.

Female:—Entire upper parts grayish olive; rump pale orange; underparts dull gray, whitening near the vent; a patch of orange on the breast; otherwise resembles the male.

Length (skin), 3.50; wing, 2.37; tail, 1.15; tarsus, .50; bill, .40.

Introduced in Cuba and Porto Rico.

Both *Spinus pinus* (Wils.) and *Spinus mexicana* (Swains.) have been recorded from Cuba; the references are as follows:

Chrysomitris pinus GUNDL. J. f. O. 1856, p. 9; *ib* Repert. Fisico-Nat. Cuba, I, p. 397 (1866).

Chrysomitris mexicana GUNDL. Repert. Fisico-Nat. Cuba, I, p. 397 (1866) (Cuba).

GENUS **Euetheia** REICH.

Euetheia REICHENBACH, Av. Syst. Nat. Knacker. pl. 79, "June 1st, 1850."

Euetheia olivacea (GMEL.).

Emberiza olivacea GMEL. Syst. Nat. I, p. 309 (1788).

Spermophila olivacea GOSSE, Bds. Jam. p. 249 (1847).—ALBRECHT, J. f. O. 1862, p. 196.

Phonipara olivacea SCL. P. Z. S. 1855, p. 159; *ib.* Cat. Am. Bds. p. 107 (1862).—MARCH. Pr. Acad. Nat. Sci. Phila. 1863, p. 297.—SCL. & SALV. Nom. Avium Neotr. p. 29 (1873).—A. & E. NEWTON, Handb. Jamaica, p. 104 (1881).—CORY, Bull. Nutt. Orn. Club, VI, p. 152 (1881); *ib.* Bds. Haiti & San Domingo, p. 65 (1885).

Euethia lepida CAB. J. f. O. 1856, p. 7.—BREWER, Pr. Bost. Soc. Nat. Hist. VII, p. 307 (1860).—GUNDL. Repert. Fisico-Nat. Cuba, I. p. 284 (1866).—SUNDEV. Oefv. K. Vet. Akad. Förh. 1869, p. 597.—GUNDL. J. f. O. 1874, p. 122; *ib.* Anal. Soc. Esp. Hist. Nat. VII, p. 204 (1878).

Fringilla (*Phonipara*) *olivacea* BRYANT. Pr. Bost. Soc. Nat. Hist. XI, p. 93 (1866).

Euetheia olivacea CORY, List Bds. W. I. p. 12 (1885).

SP. CHAR. *Male:*—Above dull olive; a superciliary stripe, and a patch on the chin and upper throat orange yellow, rest of throat black; a narrow line of black bordering the yellow of the throat, reaching to the front of the eye; lower eyelid dull yellow; underparts olivaceous gray; carpus dull yellow; bill and feet dark brown.

Female:—Lacking the black of head and throat in the male; the yellow is much less conspicuous and paler; belly dull gray; the olive of the back duller than in the male.

Length, 4; wing, 2; tail, 1.50; tarsus, .50; bill, .30.

HABITAT. Cuba, Jamaica, Haiti, San Domingo, and Porto Rico.

Euetheia canora (GMEL.).

Loxia canora GMEL. Syst. Nat. I, p. 858 (1788).

Phonipara canora BP. Consp. I, p. 494 (1850).—GRAY, Handl. Bds. II, p. 98 (1870).—SCL. & SALV. Nom. Avium Neotr. p. 29 (1873).—BD. BWR. & RIDGW. Hist. N. Am. Bds. II, p. 93 (1874).

Euethia canora BREWER, Pr. Bost. Soc. Nat. Hist. VII, p. 307 (1860).—GUNDL. Repert. Fisico-Nat. Cuba, I, p. 284 (1866); *ib.* J. f. O. 1874, p. 123.

Euetheia canora CORY, List Bds. W. I. p. 12 (1885).

SP. CHAR. *Male*:—Throat and cheeks black, extending above the eye; a broad band of bright yellow extends across the lower throat to the sides of the neck, and passes in a narrow line, edging the black, to the eye; top of head slaty brown; rest of upper surface bright olive green; breast brownish black, shading into pale gray on the belly and under tail-coverts.

Female:—Throat dark chestnut brown, shading into gray on the cheeks; yellow collar much paler than in the male; chest and underparts ashy; the rest as in the male.

Length (skin), 3.75; wing, 2; tail, 2.05; tarsus, .62.

HABITAT. Cuba.

Euetheia bicolor (LINN.).

Fringilla zena LINN. Syst. Nat. I, 10th ed. p. 183 (1758).

Fringilla bicolor LINN. Syst. Nat. I, 12th ed. p. 324 (1766).

Spermophila bicolor GOSSE, Bds. Jam. p. 252 (1847).—BRYANT, Pr. Bost. Soc. Nat. Hist. VII, p. 119 (159).—ALBRECHT, J. f. O. 1862, p. 196.

Phonipara bicolor BP. Consp. I, p. 494 (1850).—CASSIN, Pr. Acad. Nat. Sci. Phila. 1860, p. 376.—SCL. Cat. Am. Bds. p. 106 (1862).—SUNDEV. Oef. K. Vet. Akad. Förh. 1869, p. 596.—SCL. & SALV. Nom. Avium Neotr. p. 29 (1873).—CORY, Bds. Bahama I. p. 91 (1880); *ib.* Bull. Nutt. Orn. Club, VI, p. 152 (1881).—TRISTRAM, Ibis, 1884, p. 168.

Phonipara marchii BAIRD, Pr. Acad. Nat. Sci. Phila. 1863, p. 297.—A. & E. NEWTON, Handb. Jamaica, p. 104 (1881).

Fringilla (*Phonipara*) *zena* var. *portoricensis* BRYANT, Pr. Bost. Soc. Nat. Hist. X, p. 254 (1866).

Fringilla zena var. *marchi* BRYANT, Pr. Bost. Soc. Nat. Hist. XI, p. 93 (1867).

Phonipara zena BD. BWR. & RIDGW. Hist. N. Am. Bds. II, p. 93 (1874).—RIDGW. Pr. U. S. Nat. Mus. VII, p. 172 (1884).—CORY, Bds. Haiti and San Domingo, p. 63 (1885).

Euethia bicolor GUNDL. Anal. Soc. Esp. Hist. Nat. VII, p. 205 (1878).

Euetheia bicolor CORY, List Bds. W. I. p. 12 (1885).

SP. CHAR. *Male:*—General plumage dull olive; whole of breast and throat black; a blackish tinge sometimes perceptible on the forehead; belly dull gray, shading into olive on the flanks; surface of wings and tail olive; primaries, secondaries, and tail-feathers brown, showing olive on the outer webs; some males have only a small patch on the chin black, others have nearly the entire under-surface black, the extent of the color varying greatly, perhaps according to the age of the bird.

Female:—Resembles the male, but lacks the black of the throat, which is replaced by dull olivaceous gray.

Length, 4.10; wing, 2.05; tail, 1.60; tarsus, .54; bill, .40.

HABITAT. Bahama Islands and Antilles.

After a careful examination of numerous specimens of the so called *E. marchi*, from Jamaica, and comparing them with a series of some seventy specimens of *E. bicolor*, I fail to see any differences sufficient to separate them. The underparts of *E. marchi* are somewhat browner; the back is also darker; but this stage of plumage occurs in the young and the female of *E. bicolor*.

Euetheia adoxa (GOSSE).

Spermophila adoxa GOSSE, Bds. Jam. p. 253 (1847).—ALBRECHT, J. f. O. 1862, p. 196.

Phonipara adoxa "MARCH. P. A. P. 1863, p. 297."—A. & E. NEWTON, Handb. Jamaica, p. 104 (1881).—CORY, Revised List Bds. W. I. p. 12 (1886).

SP. CHAR.—"Irides dark brown; feet purplish; beak horn-colour, nearly black above; whole upper parts olive brown; under parts grayish white; sides and vent fawn color. Length, 4¼; expanse, 6½; flexture, 2; tail, 1 6-10 (nearly); rictus, 7-20; tarsus, 7-10; middle toe, 7-10." (GOSSE, l. c., orig. descr.)

HABITAT. Jamaica.

I have never seen a specimen of this so-called species; judging from the description, it would seem possible that it might prove to be the female of *E. bicolor*.

GENUS Passerina VIEILL.

Passerina VIEILLOT, Analyse (1816).

Passerina ciris (LINN.).

Emberiza ciris LINN. Kong. Sv. Vet. Akad. Hand. 1750, p. 278, tab. vii, f. 1; *ib.* Syst. Nat. I, p. 313 (1766).

Passerina ciris D'ORB. in La Sagra's Hist. Nat. Cuba, Ois. p. 102 (1840). —CORY, List Bds. W. I. p. 12 (1885).

?Linaria caniceps D'ORB. in La Sagra's Hist. Nat. Cuba, Ois. p. 107 (1840).—GUNDL. J. f. O. 1871, p. 276 (young male) (Cuba).

Spiza ciris CAB. J. f. O. 1856, p. 8 (Cuba).—BREWER, Pr. Bost. Soc. Nat. Hist. VII, p. 307 (1860) (Cuba).

Cyanospiza ciris GUNDL. Repert. Fisico-Nat. Cuba, I, p. 285 (1866).—MOORE, Pr. Bost. Soc. Nat. Hist. XIX, p. 247 (1877) (New Providence).—CORY, Bds. Bahama I. p. 89 (1880).

Accidental in Cuba and Bahamas.

Passerina cyanea (LINN.).

Tanagra cyanea LINN. Syst. Nat. I, p. 315 (1766).

Passerina cyanea D'ORB. in La Sagra's Hist. Nat. Cuba, Ois. p. 100 (1840).—CORY, List Bds. W. I. p. 12 (1885).

Spiza cyanea CAB. J. f. O. 1856, p. 8 (Cuba).—BREWER, Pr. Bost. Soc. Nat. Hist. VII, p. 307 (1860) (Cuba).

Cyanospiza cyanea GUNDL. Repert. Fisico-Nat. Cuba, I, p. 285 (1866); *ib.* J. f. O. 1874, p. 125 (Cuba). — BRACE, Pr. Bost. Soc. Nat. Hist. XIX, p. 242 (1877) (New Providence). — CORY, Bds. Bahama I. p. 90 (1880).

Accidental in Cuba and Bahamas.

GENUS Passer BRISS.

Passer BRISSON. Orn. 1760.

Passer domesticus (LINN.).

Fringilla domestica LINN. Syst. Nat. I, p. 323 (1766).

Passer domesticus BRACE, Pr. Bost. Soc. Nat. Hist. XIX, p. 240 (1877) (New Providence).—CORY, Bds. Bahama I. p. 88 (1880); *ib.* List Bds. W. I. p. 13 (1885).

An introduced species, resident in some of the Bahama Islands. Cuba?

GENUS Ammodramus SWAINS.

Ammodramus SWAINSON. Zool. Journ. III, 1827.

Ammodramus sandwichensis savanna (WILS.).

Fringilla savanna WILS. Am. Orn. III, p. 55 (1811).

Emberiza savanna LEMB. Aves Cuba, p. 55 (1850).

Passerculus savanna CAB. J. f. O. 1856, p. 6 (Cuba).—BREWER, Pr. Bost. Soc. Nat. Hist. VII, p. 307 (1860) (Cuba).—GUNDL. Repert. Fisico-Nat. Cuba, I, p. 283 (1866); *ib.* J. f. O. 1874, p. 121 (Cuba).—CORY, Bds. Bahama I. p. 88 (1880); *ib.* List Bds. W. I. p. 13 (1885).

Ammodramus sandwichensis savanna RIDGW. Proc. U. S. N. Mus. VIII, p. 354 (1885).

Recorded from the Bahamas and Cuba.

GENUS **Spizella** BONAP.

Spizella BONAPARTE, Geog. & Comp. List, p. 33 (1838).

Spizella socialis (WILS.).

Fringilla socialis WILS. Am. Orn. II, p. 127 (1810).

Emberiza pallida LEMB. Aves Cuba, p. 54 (1850).—BREWER, Pr. Bost. Soc. Nat. Hist. VII, p. 307 (1860) (Cuba).

Spinites pallidus CAB. J. f. O. 1856, p. 7 (Cuba).

Spizella socialis GUNDL. Repert. Fisico-Nat. Cuba, I, p. 284 (1866); *ib.* J. f. O. 1874, p. 121 (Cuba).—CORY, List Bds. W. I. p. 13 (1885).

Accidental in Cuba.

Ammodramus savannarum (GMEL.).

Fringilla savannarum GMEL. Syst. Nat. I, p. 921 (1788).

Coturniculus tixicrus GOSSE, Bds. Jam. p. 242 (1847).—SCL. P. Z. S. 1861, p. 72 (Jamaica).—ALBRECHT, J. f. O. 1862, p. 196 (Jamaica).—SCL. & SALV. Nom. Avium Neotr. p. 32 (1873) (Jamaica).

Emberiza passerina LEMB. Aves. Cuba, p. 56 (1850)?

Coturniculus passerinus CAB. J. f. O. 1856, p. 6 (Cuba).—BREWER, Pr. Bost. Soc. Nat. Hist. VII, p. 307 (1860) (Cuba).—MARCH, Pr. Acad. Nat. Sci. Phila. 1863, p. 298 (Jamaica).—GUNDL. Repert. Fisico-Nat. Cuba, I, p. 284 (1866); *ib.* J. f. O. 1874, p. 121 (Cuba); *ib.* Anal. Soc. Esp. Hist. Nat. VII, p. 203 (1878) (Porto Rico).—CORY, List Bds. W. I. p. 13 (1885).

Fringilla (*Coturniculus*) *passerina* BRYANT, Pr. Bost. Soc. Nat. Hist. X, p. 254 (1866) (Porto Rico).—SUNDEV. Oefv. K. Vet. Akad. Förh. 1869, p. 597 (Porto Rico).

Coturniculus savannarum A. & E. NEWTON, Handb. Jamaica, p. 104 (1881).

HABITAT. Jamaica, Cuba, and Porto Rico.

The North American form, *A. savannarum passerinus*, has been taken in the Bahama Islands, specimens of which are in my collection.

Ammodramus maritimus (WILS.).

Fringilla maritima WILS. Am. Orn. IV, p. 68 (1811).
Ammodramus maritimus SWAINS. Zool. Journ. III, p. 328 (1827).—CAB. J. f. O. 1856, p. 7 (Cuba).

Recorded from Cuba.

GENUS Sicalis BOIE.

Sicalis BOIE, 1828.

Sicalis flaveola (LINN.).

Fringilla flaveola LINN. Syst. Nat. I, p. 321 (1766).
Fringilla flava MÜLL. Syst. Nat. Suppl. p. 164 (1766).
Emberiza brasiliensis GMEL. Syst. Nat. I, p. 872 (1788).—LAFR. et D'ORB. Syn. Av. 1837, p. 73.
Fringilla brasiliensis SPIX, Av. Bras. I, p. 47, pl. 61.—MAX. Beitr. III, p. 614 (1831).
Sicalis brasiliensis TSCH. Faun. Per. p. 215 (1844).—CAB. in Schomb. Guian. III, p. 679 (1848).—BURM. Syst. Ueb. III, p. 253.—SCL. P. Z. S. 1861, p. 74.—ALBRECHT, J. f. O. 1862, p. 197.—TAYLOR, Ibis, 1864, p. 83.—WYATT, Ibis, 1871, p. 328.
Crithagra brasiliensis GOSSE, Bds. Jam. p. 245 (1847).—BP. Consp. I, p. 521 (1820).—MARCH, Pr. Acad. Nat. Sci. Phila. 1863, p. 298.
Sycalis auripectus BP. Compt. Rend. 37, p. 917.—SCL. P. Z. S. 1855, p. 159; *ib.* Cat. Am. Bds. p. 126 (1862).
Sicalis flava GRAY, Handl. Bds. II, p. 84 (1870).—A. & E. NEWTON, Handb. Jamaica, p. 117 (1881).
Sycalis flaveola PELZ. Orn. Bras. p. 231 (1871).—SCL. Ibis, 1872, p. 41.—SCL. & SALV. Nom. Avium Neotr. p. 34 (1873).—CORY, List. Bds. W. I. p. 13 (1885).

SP. CHAR. *Male:*—Above olive green, slightly marked on the back with pale streaks; forehead orange; underparts yellow; wings and tail pale brown, the outer webs of primaries and outer and inner webs of secondaries edged with yellow; tail-feathers edged with yellow.

Female:—Resembles the male, but much paler; underparts being grayish, tinged with yellow, and under surface becoming white on the belly; orange on the forehead showing very slightly if at all.

Length (skin), 5.50: wing, 2.75; tail, 2; tarsus, .75.

HABITAT. Jamaica.

The specimens described are from Brazil, as I possess none from Jamaica.

Carduelis elegans (LINN.) is recorded from Cuba by Dr. Gundlach (Repert. Fisico-Nat. Cuba, I, p. 396, 1866). It was probably an escaped cage bird.

GENUS **Habropyga** CABAN.

Habropyga CABANIS, Wiegm. Archiv, 1847, XIII, p. 331; Mus. Hein. I, p. 169.

Habropyga melpoda (VIEILL.).

Fringilla melpoda VIEILL. Nouv. Dict. XII, p. 177 (1817).
Habropyga melpoda GUNDL. Anal. Soc. Esp. Hist. Nat. VII, p. 206 (1878) (Porto Rico).

SP. CHAR. *Male:*—Top of head drab gray; sides of the head and cheeks, including the eye, reddish orange; back and wings light brown; lower rump and upper tail-coverts crimson; throat dull white, shading into gray on the sides of the neck, separating the orange of the cheeks from the brown of the upper parts; rest of underparts dull grayish, showing a purplish tinge on the flanks; a spot of pale reddish orange near the vent; wings and tail brown.

Female:—Top of head drab gray, paler than in the male; rest of upper parts like the male; no orange on side of the head; underparts showing a pale orange yellow tinge.

Length (skin), 4.10; wing, 1.85; tail, 1.75; tarsus, .56.

An introduced species, common in Porto Rico.

FAMILY PLOCEIDÆ.

GENUS **Spermestes** SWAINS.

Spermestes SWAINSON, Class. Birds, p. 280 (1837).

Spermestes cucullatus (SWAINS.).

Loxia cucullata SWAINS. Zool. Illust. 1820, pl. 7.
Spermestes cucullata SWAINS. REICH. Singv. t. 12, pp. 114, 115. —BP. Consp. I, p. 454 (1850).—SUNDEV. Oefv. K. Vet. Akad. Förh. 1869, p. 597.—GRAY, Handl. Bds. II, p. 54 (1870).
Loxia (*Spermestes*) *cucullata* BRYANT, Pr. Bost. Soc. Nat. Hist. X. p. 254 (1866).
Spermestes cucullatus GUNDL. Anal. Soc. Esp. Hist. Nat. VII, p. 206 (1878).—CORY, List Bds. W. I. p. 13 (1885).

SP. CHAR. *Male:*—Top of head dark green, rest of upper surface pale brown; feathers on the rump alternately banded with dark brown and white; throat and breast dark green, showing purple in some lights; belly white, having a patch of metallic green on the sides; flanks and thighs banded with white and brown; wings pale brown, a patch of metallic green on the coverts; tail dark brown.

Female:—Above pale brown, darkest on the head; underparts pale rufous; wings and tail brown.

Length (skin), 4; wing, 2; tail, 1; tarsus, .40.

An introduced species, resident in Porto Rico.

FAMILY ICTERIDÆ.

GENUS **Icterus** BRISS.

Icterus BRISSON, Orn. II, p. 85 (1760).

Icterus bonana (LINN.).

Oriolus bonana LINN. Syst. Nat. I, p. 162 (1766).

Icterus bonana DAUD. Tr. d'Orn. II, p. 332 (1800).—SCL. & SALV. Nom. Avium Neotr. p. 36 (1873).—LAWR. Pr. U. S. Nat. Mus. I, p. 355 (1878).—SCL. Ibis, 1883, p. 358.—CORY, List Bds. W. I. p. 13 (1885).

Pendulinus bonana VIEILL. Nouv. Dict. V, p. 316.—BP. Consp. I, p. 432 (1850).—CASSIN, Pr. Acad. Nat. Sci. Phila. 1867, p. 54.

Xanthornus bonana CAB. Mus. Hein. p. 183.

Icterus bonanæ SCL. Cat. Am. Bds. p. 131 (1862).

SP. CHAR. *Male:*—Head, throat, and upper breast dark reddish brown; upper half of back, wings and tail black; lower half of back, including rump, dull orange; lesser wing-coverts dull brownish orange; under wing-coverts orange, somewhat brighter than the color of the belly.

Length (skin), 8.25; wing, 3.50; tail, 3.15; tarsus, .78.

HABITAT. Martinique.

Icterus hypomelas (BONAP.).

Icterus dominicensis VIGORS, Zool. Journ. 1828, p. 441.—"ALBRECHT, J. f. O. 1861, p, 212."

Icterus virescens VIGORS, Zool. Journ. 1828, p. 441.

Psarocolius melanopis WAGL. Isis, 1829, p. 759.

Xanthornus dominicensis D'ORB. in La Sagra's Hist. Nat. Cuba, Ois. p. 115 (1840).—GUNDL. Journ. Bost. Soc. Nat. Hist. VI, p. 318 (1852).—CAB. J. f. O. 1856, p. 10.—BREWER, Pr. Bost. Soc. Nat. Hist. VII, p. 307 (1860).

Pendulinus hypomelas BP. Consp. I, p. 433 (1850).—CASSIN, Pr. Acad. Nat. Sci. Phila. 1867, p. 59.

Xanthornus hypomelas GUNDL. Repert. Fisico-Nat. Cuba, I, p. 287 (1866); *ib.* J. f. O. 1874, p. 128.

Melanopsar hypomelas GRAY, Handl. Bds. II, p. 32 (1870).

Icterus hypomelas SCL. & SALV. Nom Avium Neotr. p. 36 (1873).—SCL. Ibis, 1883, p. 360.—CORY, List Bds. W. I. p. 13 (1885).

Icterus dominicensis var. *hypomelas* BD. BWR. & RIDGW. Hist. N. Am. Bds. II, p. 182 (1874).

SP. CHAR. *Male:*—Entire plumage glossy black; lower half of back, thighs and under tail-coverts, and a tinge on the lower belly, bright yellow; wing-coverts, carpus, and under wing-coverts bright yellow; quills and tail brownish black.

The young birds of both sexes go through the varied plumages of the young of *Icterus dominicensis*.

Length (skin), 7.75; wing, 3.62; tail, 3.70; tarsus, .90; bill, .60.

HABITAT. Cuba.

Icterus dominicensis (LINN.).

Oriolus dominicensis LINN. Syst. Nat. I, p. 163 (1766).

Icterus dominicensis DAUD. Tr. d'Orn. II, p. 335 (1800).—SALLÉ, P. Z. S. 1857, p. 232.—BRYANT, Pr. Bost. Soc. Nat. Hist. XI, p. 94 (1866).—SCL. & SALV. Nom. Avium Neotr. p. 36 (1873).—CORY, Bull. Nutt. Orn. Club, VI, p. 152 (1881); *ib.* Bds. Haiti & San Domingo, p. 71 (1885); *ib.* List Bds. W. I. p. 13 (1885).—SCL. Ibis, 1883, p. 361.—TRISTRAM, Ibis, 1884, p. 168.

Pendulinus flavigaster VIEILL. Nouv. Dict. V, p. 317.

Melanopsar dominicensis GRAY, Handl. Bds. II, p. 32 (1870).

Icterus dominicensis var. *dominicensis* BD. BWR. & RIDGW. Hist. N. Am. Bds. II, p. 182 (1874).

SP. CHAR. *Male:*—General plumage black; upper wing-coverts, edge of carpus, under wing-coverts, lower half of back, rump, flanks, crissum, and under tail-coverts bright yellow; outer surface of wings black; under surface of wings showing the inner webs of the feathers pale, becoming dull white at the base; bill and legs black.

Young:—Throat, cheeks, and a narrow superciliary stripe black; crown, sides of the head and breast showing a brownish tinge; rest of underparts greenish yellow; back ashy green, becoming decidedly greenish on the rump; tail olive, brightest on the edges of the feathers; primaries and secondaries brown with pale edgings.

The sexes are apparently similar.

Length, 7.10; wing, 3.60; tail, 3.50; tarsus, .80; bill, .70.

HABITAT. Haiti and San Domingo.

Icterus portoricensis (BRYANT).

Icterus dominicensis TAYLOR, Ibis, 1864, p. 167.

Icterus dominicensis var. *portoricensis* BRYANT, Pr. Bost. Soc. Nat. Hist. X, p. 254 (1866).—SUNDEV. Oefv. K. Vet. Akad. Förh. 1869, p. 597. —BD. BWR. & RIDGW. Hist. N. Am. Bds. II, p. 182 (1874).

Pendulinus portoricensis CASSIN, Pr. Acad. Nat. Sci. Phila. 1867, p. 58.

Icterus xanthomus SUNDEV. Oefv. K. Vet. Akad. Förh. 1869, p. 598.

Melanopsar portoricensis GRAY, Handl. Bds. II, p. 32 (1870).

Icterus portoricensis SCL. & SALV. Nom. Avium Neotr. p. 36 (1873).—SCL. Ibis, 1883, p. 361.—CORY, List Bds. W. I. p. 13 (1885).

Xanthornus portoricensis GUNDL. Anal. Soc. Esp. Hist. VII, p. 210 (1878).

SP. CHAR. *Male:*—General plumage black; abdomen, crissum, rump, and under wing-coverts yellow; wing-coverts bright yellow, forming a broad shoulder patch; some of the feathers on the belly faintly edged with yellowish; primaries edged with dull white on the basal portion of the inner webs; wings and tail dark brown.

Immature males and females resemble those of *I. dominicensis*, and go through the same varied stages of plumage. A greenish brown specimen in my collection is labelled "adult female," but this is probably incorrect.

Length (skin), 7.50; wing, 3.50; tail, 3.25; tarsus, .95; bill, .67.

HABITAT. Porto Rico.

Icterus laudabilis SCL.

Icterus laudabilis SCL. P. Z. S. 1871, p. 270.—SCL. & SALV. Nom. Avium Neotr. p. 36 (1873).—ALLEN, Bull. Nutt. Orn. Club, V, p. 166 (1880).—SCL. Ibis. 1883, p. 361.—CORY, List Bds. W. I. p. 13 (1885).

SP. CHAR. *Male:*—General plumage glossy black; rump, thighs, lower belly and lower half of back yellow, with a tinge of orange; under wing-coverts, carpus, and lesser-coverts pale yellow; greater wing-coverts edged with white on the inner webs; lower mandible bluish at the base; upper mandible and legs brownish black.

Length (skin), 7.50; wing, 3.85; tail, 3.75; tarsus, .90.

HABITAT. Santa Lucia.

Icterus cucullatus SWAINS.

Icterus cucullatus SWAINS. Phil. Mag. 1827, p. 436.—GUNDL. Repert. Fisico-Nat. Cuba, I, p. 286 (1866); *ib.* J. f. O. 1874, p. 127 (Cuba). —CORY, List Bds. W. I. p. 13 (1885).

Hyphantes costototl GUNDL. J. f. O. 1856, p. 11; *ib.* 1861, p. 413 (Cuba).

Yphantes bullockii BREWER, Pr. Bost. Soc. Nat. Hist. VII, p. 307 (1860) (Cuba).

Recorded from Cuba.

Icterus leucopteryx (WAGL.).

Psarocolius leucopteryx WAGL. Syst. Av. Sp. 16.
Icterus personatus TEMM. Pl. Col. sub tab. p. 482 (1820-39).—BP. Consp. I, p. 435 (1850).
Icterus leucopteryx GOSSE, Bds. Jam. p. 226 (1847).—BP. Consp. I, p. 436 (1850).—SCL. Cat. Am. Bds. p. 34 (1862).—ALBRECHT, J. f. O. 1862, p. 197.—MARCH, Pr. Acad. Nat. Sci. Phila. 1863, p. 299.—SCL. & SALV. Nom. Avium Neotr. p. 36 (1873).—A. & E. NEWTON, Handb. Jamaica, p. 104 (1881).—SCL. Ibis, 1883, p. 374.—CORY, List Bds. W. I. p. 13 (1885).
Pendulinus leucopteryx CASSIN, Pr. Acad. Nat. Sci. Phila. 1867, p. 59.
Melanopsar leucopteryx GRAY, Handl. Bds. II, p. 32 (1870).

SP. CHAR. *Male:*—Throat, forehead, and in front of the eyes black; upper plumage yellowish green; underparts yellow; wings and tail black; wing-coverts pure white; showing a broad patch of white on the wing.

Female:—Black markings replaced by brownish black; tail pale greenish yellow instead of black; otherwise resembles the male.

Length (skin), 7.75; wing, 4.20; tail, 3.25; tarsus, .90; bill, .78.

HABITAT. Jamaica.

Icterus spurius (LINN.).

Oriolus spurius LINN. Syst. Nat. I, p. 162 (1766).
Icterus spurius GUNDL. Repert. Fisico-Nat. Cuba, I, p. 286 (1866); *ib.* J. f. O. 1874, p. 127 (Cuba).—CORY, List Bds. W. I. p. 13 (1885).

Accidental in Cuba.

Icterus oberi LAWR.

Icterus oberi LAWR. Pr. U. S. Nat. Mus. III, p. 351 (1880).—GRISDALE, Ibis, 1882, p. 487. pl. XIII.—SCL. Ibis, 1883, p. 362.—CORY, List Bds. W. I. p. 13 (1885).

"*Male:*—Head, neck, upper part of breast, back, wings and tail black; lower part of breast, abdomen, under tail-coverts and rump light brownish chestnut, with the concealed bases of the feathers of a clear light yellow; the thighs are yellow with a wash of chestnut; edge of wing and under wing-coverts yellow; bill black, with the sides of the under mandible bluish for half its length from the base; tarsi and toes black.

"Length (skin), 8½ inches; wing, 3⅜; tail, 4; tarsus, ⅞; bill, ⅞.

"The female has the upper plumage of a dull greenish olive, with a yellowish tinge, the front and rump inclining more to yellow; the

tail-feathers are yellowish green; quills brownish black; the primaries and secondaries are edged narrowly with dull yellowish gray; tertials are margined with fulvous; wing-coverts dark brown, margined with fulvous; edge of wing yellow; the under plumage is of a rather dull dark yellow; the breast and under tail-coverts are of a deeper or warmer color; the sides are greenish olive; bill and legs as in the male.

"The young male resembles the female in plumage, but has the back somewhat darker." (LAWR. l. c., orig. descr.)

HABITAT. Montserrat.

Icterus icterus (LINN.).

Oriolus icterus LINN. Syst. Nat. I, p. 161 (1766).

Icterus vulgaris DAUD. Tr. d'Orn. II, p. 340 (1800).—BP. Consp. I, p. 434 (1850).—BAIRD, Bds. N. Am. p. 542 (1858).—SCL. Cat. Am. Bds. p. 133 (1862).—CASSIN, Pr. Acad. Nat. Sci. Phila. 1867, p. 46.—FINSCH, P. Z. S. 1870, p. 578.—SCL. & SALV. Nom. Avium Neotr. p. 36 (1873).—GUNDL. Anal. Soc. Esp. Hist. Nat. VII, p. 209 (1878).—SALV. & GODM. Ibis, 1879, p. 200.—A. & E. NEWTON, Handb. Jamaica, p. 104 (1881).—SCL. Ibis, 1883, p. 369.—CORY, List Bds. W. I. p. 13 (1885).

Icterus longirostris VIEILL. Nouv. Dict. 34, p. 547.—BP. Consp. I, p. 435 (1850).—CASSIN, Pr. Acad. Nat. Sci. Phila. 1867, p. 46.

SP. CHAR. *Male*:—Entire head, throat, and a broad patch on the back black; wings and tail very dark brown, almost black, the former having some of the coverts white, forming a wing-band; outer webs of secondaries edged with white; rest of plumage bright orange yellow; the orange of the rump and nape being separated by the black back-patch before mentioned; feathers of the throat narrow and sharply pointed; bill black, the base of lower mandible bluish white.

The sexes are described as similar.

Length (skin), 10; wing, 4.50; tail, 4; tarsus, 1.25; bill, 1.15.

Porto Rico, Jamaica, and St. Thomas (introduced).

Icterus galbula (LINN.).

Coracias galbula LINN. Syst. Nat. 10th ed. (1758).

Icterus baltimore LEMB. Aves Cuba, p. 63 (1850).—GUNDL. Repert. Fisico-Nat. Cuba, I, p. 286 (1866); *ib.* J. f. O. 1874, p. 127 (Cuba).

Hyphantes baltimore CAB. J. f. O. 1856, p. 10 (Cuba).

Yphantes baltimore BREWER, Pr. Bost. Soc. Nat. Hist. VII, p. 307 (1860) (Cuba).

Icterus galbula COUES, Bull. Nutt. Orn. Club, V, p 98 (1880).—CORY, List Bds. W. I. p. 13 (1885).

Accidental in Cuba.

GENUS **Dolichonyx** SWAINS.

Dolichonyx SWAINSON, Zool. Journ. III, p. 351 (1827).

Dolichonyx oryzivorus (LINN.).

Emberiza oryzivora LINN. Syst. Nat. I, p. 311 (1766).

Dolichonyx oryzivorus GOSSE, Bds. Jam. p. 229 (1847).—CAB. J. f. O. 1856, p. 11 (Cuba).—BREWER, Pr. Bost. Soc. Nat. Hist. VII, p. 307 (1860) (Cuba).—SCL. P. Z. S. 1861, p. 74 (Jamaica).—ALBRECHT, J. f. O. 1862, p. 197 (Jamaica).—GUNDL. Repert. Fisico-Nat. Cuba, I, p. 287 (1866); *ib.* J. f. O. 1874, p. 129 (Cuba).—CORY, Bds. Bahama I. p. 97 (1880).—A. & E. NEWTON, Handb. Jamaica, p. 104 (1881).—CORY, List Bds. W. I. p. 14 (1885).

Dolichonix oryzivora LEMB. Aves Cuba, p. 57 (1850).

Dolichonyx orizyvora BRYANT, Pr. Bost. Soc. Nat. Hist. VII, p. 119 (1859) (Bahamas).

Dolichonyx orizivorus MARCH, Pr. Acad. Nat. Sci. Phila. 1863, p. 299 (Jamaica).

Recorded from the Bahamas, Cuba, Jamaica, and Grenada.

Molothrus bonariensis (Cab.) is recorded from Bisque, Virgin Islands (*Molothrus sericeus* (Licht.) Newton, Ibis, 1860, p. 308). It is a South American species.

GENUS **Agelaius** VIEILL.

Agelaius VIEILLOT, Analyse, p. 33 (1816).

Agelaius humeralis (VIG.).

Leistes humeralis VIG. Zool. Journ. III, p. 442 (1827).

Icterus humeralis D'ORB. in La Sagra's Hist. Nat. Cuba, Ois. p. 114, pl. 5 (1840).

Agelæus humeralis BP. Consp. I, p. 430 (1850).—GUNDL. J. f. O. 1855, p. 13.—SCL. Cat. Am. Bds. p. 136 (1862).—SCL. & SALV. Nom. Avium Neotr. p. 37 (1873).— SCL. Ibis, 1884, p. 11.—CORY, List Bds. W. I. p. 14 (1885).

Agelaius humeralis BREWER, Pr. Bost. Soc. Nat. Hist. VII, p, 307 (1860). —GUNDL. Repert. Fisico-Nat. Cuba, I, p. 288 (1866); *ib.* J. f. O. 1874, p. 130.—GRAY, Handl. Bds. II, p. 33 (1870).

SP. CHAR. *Male:*—General plumage uniform lustrous black, showing a slight brownish tinge on the thighs and quills when held in the light; shoulders and lesser coverts dull orange brown, shading into pale buff on the middle coverts; bill and feet black.

The sexes are similar.

Length (skin), 7.50; wing, 4; tail, 3.15; tarsus, .95; bill, .60.

HABITAT. Cuba.

Agelaius xanthomus SCL.

Agelaius chrysopterus VIEILL. Nouv. Dict. 34, p. 539.—GUNDL. Anal. Soc. Esp. Hist. Nat. VII, p. 211 (1878); *ib.* J. f. O. 1878, p. 177.
Icterus xanthomus SCL. Cat. Am. Bds. p. 131 (1862).—TAYLOR, Ibis, 1864, p. 168.—BRYANT, Pr. Bost. Soc. Nat. Hist. X, p. 254 (1866).
Hyphantes xanthomus CASSIN, Pr. Acad. Nat. Sci. Phila. 1867, p. 63.
Agelæus chrysopterus SUNDEV. Oefv. K. Vet. Akad. Förh. 1869, p. 597.—SCL. & SALV. Nom. Avium Neotr. p. 37 (1873).
Agelæus xanthomus SCL. Ibis, 1884, p. 12.—CORY, List Bds. W. I. p. 14 (1885).

SP. CHAR. *Male:*—General plumage lustrous black; shoulders and coverts bright golden yellow; quills and tail showing a faint brownish tinge, apparently wanting in some specimens.

The sexes are similar.

Length (skin), 8; wing, 4.50; tail, 3.50; tarsus, .95; bill, .60.

HABITAT. Porto Rico.

Agelaius phœniceus (LINN.).

Oriolus phœniceus LINN. Syst. Nat. I, p. 161 (1766).
Agelæus phoeniceus CAB. J. f. O. 1856, p. 11 (Cuba).—CORY, Bds. Bahama I. p. 98 (1880); *ib.* List Bds. W. I. p. 14 (1885).
Agelaius phœniceus BRYANT, Pr. Bost. Soc. Nat. Hist. VII, p. 119 (1859) (Bahamas).

Not uncommon in the Bahama Islands where it probably breeds. Cuba?

Agelaius assimilis GUNDL.

Agelaius assimilis GUNDL. in Lemb. Aves Cuba, p. 64 (1850); *ib.* J. f. O. 1856, p. 12; *ib.* 1861, pp. 332, 413; *ib.* 1874, p. 131.—BREWER, Pr. Bost. Soc. Nat. Hist. VII, p. 307 (1860).—GRAY, Handl. Bds. II, p. 33 (1870).
Agelaius phœniceus var. *assimilis* COUES, Bds. N. W. p. 186 (1874).—BD. BWR. & RIDGW. Hist. N. Am. Bds. II, p. 159 (1874).
Agelæus assimilis SCL. Ibis, 1884, p. 10.—CORY, List. Bds. W. I. p. 14 (1885).

SP. CHAR. *Male:*—Similar to *Agelæus phœniceus*, but somewhat smaller.

Female:—Entirely black; showing a brownish tinge on the head, back, and breast.

Length (skin), 7.75; wing, 3.75; tail, 3; tarsus, 1; bill, .75.

HABITAT. Cuba.

GENUS **Xanthocephalus** BONAP.

Xanthocephalus BONAPARTE, Consp. I, p. 431 (1850).

Xanthocephalus xanthocephalus (BONAP.).

Icterus icterocephalus BP. Am. Orn. I, p. 27 (1825).

Xanthocephalus icterocephalus GUNDL. J. f. O. 1862, p. 178 (Cuba); *ib.* Repert. Fisico-Nat. Cuba, I, p. 288 (1866); *ib.* J. f. O. 1874, p. 133 (Cuba).—CORY, List Bds. W. I. p. 14 (1885).

Dr. Gundlach writes me that he purchased a bird of this species in the market in Havana.

GENUS **Sturnella** VIEILL.

Sturnella VIEILLOT, Analyse, p. 34 (1816).

Sturnella hippocrepis WAGL.

Sturnella hippocrepis WAGL. Isis, 1832, p. 281.—CAB. J. f. O. 1856, p. 14.—LAWR. Ann. N. Y. Lyc. VII, p. 266 (1860).—BREWER, Pr. Bost. Soc. Nat. Hist. VII, p. 307 (1860).—ALBRECHT, J. f. O. 1861, p. 206.—SCL. Ibis, 1861, p. 179; *ib.* Cat. Am. Bds. p. 139 (1862).—GUNDL. J. f. O. 1861, pp. 332, 413; *ib.* 1871, p. 276; *ib.* 1874, p. 133.—CASSIN, Pr. Acad. Nat. Sci. Phila. 1866, p. 24.—CORY, List Bds. W. I. p. 14 (1885).

Sturnella ludoviciana SCL. & SALV. Nom. Avium Neotr. p. 38 (1873) (Cuba).

Sturnella ludoviciana var. *hippocrepis* BD. BWR. & RIDGW. Hist. N. Am. Bds. II, p. 172 (1874).—SCL. Ibis, 1884, p. 25.

SP. CHAR. *Male:*—Above mottled with buff, black and brown; the feathers of the back being dark brown, bordered and blotched with buff and light brown; a narrow imperfect stripe of whitish on the middle of the crown; a stripe of yellow from the nostril, over the eye, continuing in a stripe of dull buffy white to the sides of the neck; cheeks brownish; throat and middle underparts yellow, interrupted by a band of black on the upper breast; sides of the body, lower belly, and under tail-coverts dull buff, the feathers heavily streaked with dark brown; a patch of yellow on the carpus; legs and feet pale brown.

The sexes are similar.

Length (skin), 8.45; wing, 3.95; tail, 2.75; tarsus, 1.50; bill, 1.10.

Has a general resemblance to Florida specimens of *Sturnella magna*, but differing from it in having the legs and claws larger, and the underparts much more streaked.

HABITAT. Cuba.

GENUS **Nesopsar** SCL.

Nesopsar SCLATER, Ibis, 1859, p. 457.

Nesopsar nigerrimus (OSBURN).

Icterus nigerrimus, OSBURN, Zoologist. pp. 6661, 6714 (1859).
Nesopsar nigerrimus SCL. Ibis, 1059, p. 457; *ib.* Cat. Am. Bds. p. 139 (1862).—ALBRECHT, J. f. O. 1862, p. 197.—MARCH, Pr. Acad. Nat. Sci. Phila. 1863, p. 299.—GRAY, Handl. Bds. II, p. 34 (1870).—SCL. & SALV. Nom. Avium Neotr. p. 38 (1873).—A. & E. NEWTON, Handl. Bds. p. 103 (1881).—CORY, List Bds. W. I. p. 14 (1885).
Agelaius nigerrimus CASSIN, Pr. Acad. Nat. Sci. Phila. 1861, p. 12.—PELZ. Ibis, 1873, p. 28.
Agelæus nigerrimus SCL. Ibis, 1884, p. 14.

SP. CHAR. *Male:*—General plumage glossy blue black; dull black on the belly; wings and tail very dark brown, almost black; under-surface of wings and tail showing a brownish tinge when held in the light; bill black, a faint pale mark at the base of the lower mandible.

The sexes are similar.

Length (skin), 6.50; wing, 3.50; tail, 2.50; tarsus, .90; bill, .75.

HABITAT. Jamaica.

GENUS **Quiscalus** VIEILL.

Quiscalus VIELLOT, Analyse, p. 37 (1816).

Quiscalus fortirostris LAWR.

Quiscalus rectirostris CASSIN, Pr. Acad. Nat. Sci. Phila. 1866, p. 409?
Quiscalus fortirostris LAWR. Pr. Acad. Nat. Sci. Phila. 1868, p. 360.—SCL. Ibis, 1873, p. 324; *ib.* P. Z. S. 1874, p. 175.—SCL. & SALV. Nom. Avium Neotr. p. 38 (1873).—SCL. Ibis, 1884, p. 161.—CORY, List Bds. W. I. p. 14 (1885).
Holoquiscalus rectirostris GRAY, Handl. Bds. II, p. 38 (1870)?
Holoquiscalus fortirostris GRAY, Handl. Bds. II, p. 38 (1870).

SP. CHAR. *Male:*—Head and back purplish black; a faint greenish tinge on the thighs and under tail-coverts; wings and tail black, showing greenish reflections; bill and feet black.

Female:—Similar to the male, but is somewhat duller in coloration, and is apparently smaller.

Length (skin), 8.60; wing, 4.25; tail, 3.75; tarsus, 1.25; bill, 1.

HABITAT. Barbadoes.

Quiscalus inflexirostris SWAINS.

Quiscalus inflexirostris SWAINS. An. in Men. p. 309 (1838).—BP. Consp. I. p. 424 (1850).—CASSIN, Pr. Acad. Nat. Sci. Phila. 1866, p. 407.—SEMPER, P. Z. S. 1872, p. 651.—SCL. P. Z. S. 1874, p. 175.—BD. BWR. & RIDGW. Hist. N. Am. Bds. II, p. 214 (1874).—LAWR. Pr. U. S. Nat. Mus. I, pp. 355, 487 (1878).—SCL. Ibis, 1884, p. 160.—CORY, List Bds. W. I. p. 14 (1885).

Quiscalus barita TAYLOR, Ibis, 1864, p. 168.

Holoquiscalus inflexirostris GRAY, Handl. Bds. II, p. 38 (1870).

Quiscalus luminosus ALLEN, Bull. Nutt. Orn. Club, V, p. 166 (1880).

SP. CHAR. *Male:*—Entire plumage lustrous black, showing a purplish tinge on the head, back, and breast, when held in the light; wings and tail bluish black; bill and feet black.

Female?—Top of head grayish brown, becoming darker brown on the back; throat dull white; underparts buffy brown; a streak of pale buff from the eye to the nape, bordered below by a narrow streak of pale brown; quills and tail dark brown, showing a slight tinge of bluish.

Immature males are intermediate between the female? and adult male, being light brown and black in patches.

Length (skin), 9; wing, 4.75; tail, 4; tarsus, 1.25; bill, 1.

HABITAT. Santa Lucia and Martinique.

Quiscalus brachypterus CASSIN.

Quiscalus brachypterus CASSIN, Pr. Acad. Nat. Sci. Phila. 1866, p. 406.—SCL. & SALV. Nom. Avium Neotr. p. 38 (1873).—SCL. Ibis, 1884, p. 160.—CORY, List Bds. W. I. p. 14 (1885).

Quiscalus crassirostris GUNDL. J. f. O. 1866, p. 188.—BRYANT, Pr. Bost. Soc. Nat. Hist. X, p. 255 (1886). SUNDEV. Oefv. K. Vet. Akad. Förh. 1869, p. 598.

Chalcophanes lugubris SUNDEV. Oefv. K. Vet. Akad. Förh. 1869, p. 598.

Holoquiscalus brachypterus GRAY, Handl. Bds. II, p. 38 (1870).

Chalcophanes brachypterus GUNDL. J. f. O. 1874, p. 312; *ib.* 1878, p. 177; *ib.* Anal. Soc. Esp. Hist. Nat. VII, p. 213 (1878).

Quiscalus baritus var. *brachypterus* BD. BWR. & RIDGW. Hist. N. Am. Bds. II, p. 213 (1874).

SP. CHAR. *Male:*—Entire plumage black, showing a purplish tinge when held in the light; the wings and tail have a greenish gloss; inner surface of wings showing a brownish tinge when held in the light.

The sexes appear to be similar.

Length (skin), 8.50; wing, 4.50; tail, 3.75; tarsus, 1.10; bill, 90.

HABITAT. Porto Rico.

Quiscalus crassirostris SWAINS.

Gracula barita LINN. Syst. Nat. I, p. 165 (1766) ?
Sturnus jamaicensis DAUD. Tr. d'Orn. II, p. 317 (1800) ?
Quiscalus crassirostris SWAINS. An. in Men. p. 355 (1838).—GOSSE, Bds. Jam. p. 217 (1847).—BP. Consp. I, p. 425 (1850).—ALBRECHT, J. f. O. 1862, p. 197.—MARCH, Pr. Acad. Nat. Sci. Phila. 1863, p. 298.—SCL. & SALV. Nom. Avium Neotr. p. 38 (1873).—A. & E. NEWTON, Handb. Jamaica, p. 103 (1881).—SCL. Ibis, 1884, p. 159.—CORY, List Bds. W. I. p. 14 (1885).
Quiscalus baritus CASSIN, Pr. Acad. Nat. Sci. Phila. 1866, p. 405.
Holoquiscalus baritus GRAY, Handl. Bds. II, p. 38 (1870).
Quiscalus baritus var. *baritus* BD. BWR. & RIDGW. Hist. N. Am. Bds. II, p. 213 (1874).

SP. CHAR. *Male:*—Upper plumage lustrous blue-black, showing a tinge of purple when held in the light; underparts black, brownish black on the belly; quills and tail brownish black.

The sexes are described as similar.

Length (skin), 10; wing, 5; tail, 4.50; tarsus, 125; bill, 90.

HABITAT. Jamaica.

Quiscalus luminosus LAWR.

Quiscalus sp. LAWR. Pr. U. S. Nat. Mus. I, p. 191 (1878).
Quiscalus luminosus LAWR. Ann. N. Y. Acad. Sci. I, p. 162 (1878); *ib.* Pr. U. S. Nat. Mus. I, pp. 265, 487 (1878).—OBER, Camps in the Caribbees, p. 247 (1880).—SCL. Ibis, 1884, p. 161.—CORY, List Bds. W. I. p. 14 (1885).

"*Male:*—The general plumage is of a lustrous dark bluish violet; the upper and under tail-coverts are dull dark green; tail dark glossy green; tertials, outer webs of larger quills, and the middle and larger wing-coverts, glossy green like the tail; the inner webs of the larger quills are black; smaller wing-coverts the color of the back; under wing-coverts black; the bill and feet are black; 'iris yellow.'

"*Female:*—Upper plumage of a fine dark brown, light on the crown, the feathers of which are margined with dull pale rust color; the tail is blackish-brown, with a wash of greenish; quills dark brown; the under plumage is dark brownish-ash, lighter on the throat and breast, and fuliginous on the flanks, lower part of abdomen, and under tail-coverts; on the lower part of the neck is a wash of dull rust-color; bill and feet black; 'iris yellow.'" (LAWR., orig. descr.)

Length (skin), 10.50; wing, 4.90; tail, 4.25; tarsus, 1 25; bill, 1.25.

HABITAT. Grenada.

Specimens which I have compared appear to differ very slightly from Santa Lucia specimens of *Q. inflexirostris.* The color-

ation of Grenada specimens is possibly somewhat brighter, but their specific distinctness is questionable.

Quiscalus guadeloupensis LAWR.

Quiscalus guadeloupensis LAWR. Pr. U. S. Nat. Mus. I, pp. 457, 487 (1878).—SCL. Ibis, 1884, p. 160.—CORY, List Bds. W. I. p. 14 (1885).

"*Male:*—The general plumage is of a deep purplish-violet; the wing-coverts have a decided green lustre; tail black, glossed with green; quills black, with a greenish tinge; bill and feet black." (LAWR., orig. descr.)

Female:—Top of head dull brown, becoming darker brown on the back and wings; throat white; a faint moustache-like streak extending from the lower mandible on the sides of the throat; a dull line of buffy-white passing from the upper mandible through the eye; ear-coverts brownish; breast buffy-white; belly dull white, tinged with brownish-olive on the sides; wings and tail dark brown.

Length (skin), 9.75; wing, 5; tail, 4.50; tarsus, 1.25; bill, 1.

HABITAT. Guadeloupe.

Quiscalus gundlachii CASSIN.

Quiscalus barytus D'ORB. in La Sagra's Hist. Nat. Cuba, Ois. p. 120 (1840).—THIENEM. J. f. O. 1857, p. 145.

Chalcophanes barytus CAB. Mus. Hein. I, p. 197 (1851).—GUNDL. J. f. O. 1856, p. 15.

Calcophanes baritus BREWER, Pr. Bost. Soc. Nat. Hist. VII, p. 307 (1860).

Quiscalus gundlachii CASSIN, Pr. Acad. Nat. Sci. Phila. 1866, p. 406.

Holoquiscalus gundlachii GRAY, Handl. Bds. II, p. 38 (1870).

Chalcophanes gundlachii GUNDL. J. f. O. 1874, p. 135.

Quiscalus baritus var. *gundlachii* BD. BWR. & RIDGW. Hist. N. Am. Bds. II, p. 213 (1874).

Quiscalus gundlachi SCL. Ibis, 1884, p. 159.—CORY, List Bds. W. I. p. 14 (1885).

Sp. CHAR. *Male:*—General plumage black, with purplish and bluish reflections; wings and tail showing greenish or bluish reflections when held in the light.

Length (skin), 11.50; wings, 6; tail, 5; tarsus, 1.55; bill, 1.25.

HABITAT. Cuba.

Quiscalus niger (BODD.).

Oriolus niger BODD. Tabl. Pl. Enl. p. 31 (1783).

Quiscalus barita SALLÉ, P. Z. S. 1857, p. 232.

Quiscalus niger CASSIN, Pr. Acad. Nat. Sci. Phila. 1886, p. 407.—SCL. Ibis, 1884, p. 159.—CORY, Bds. Haiti & San Domingo, p. 73 (1885); *ib.* List Bds. W. I. p. 14 (1885).

Quiscalus ater BRYANT, Pr. Bost. Soc. Nat. Hist. XI, p. 94 (1866).—CORY, Bull. Nutt. Orn. Club, VI, p. 153 (1881).—TRISTRAM, Ibis, 1884, p. 168.

Holoquiscalus niger GRAY, Handl. Bds. II, p. 38 (1870).

Quiscalus baritus var. *niger* BD. BWR. & RIDGW. Hist. N. Am. Bds. II, p. 213 (1874).

SP. CHAR. *Male:*—General plumage lustrous black, showing purple when held in the light; wings and tail black with bluish reflections; bill and feet black.

The sexes are similar.

Length, 10.25; wing, 5.40; tail, 5; tarsus, 1.30; bill, 1.10.

HABITAT. Haiti and San Domingo.

Quiscalus atroviolaceus D'ORB.

Quiscalus atroviolaceus D'ORB. in La Sagra's Hist. Nat. Cuba Ois. p. 121 (1840).—CORY, List. Bds. W. I. p. 14 (1885).

Scaphidurus atroviolaceus GRAY & MITCH. Gen. Bds. II, p. 341.—BP. Consp. I, p. 426 (1850).

Scolecophagus atroviolaceus CAB. Mus. Hein. I. p. 196 (1851); *ib.* J. f. O. 1856, p. 15.—BREWER, Pr. Bost. Soc. Nat. Hist. VII, p. 307 (1860).—CASSIN, Pr. Acad. Nat. Sci. Phila. 1866, p. 415.—GUNDL. J. f. O. 1874, p. 134.

? *Chalcophanes quiscalus* GUNDL. J. f. O. 1856, p. 16; *ib.* 1871, p. 288.

Dives atroviolaceus GRAY, Handl. Bds. II, p. 39 (1870).—SCL. Ibis, 1884, p. 152.

SP. CHAR. *Male:*—Entire plumage lustrous black; purplish on the head, back, and breast; bluish on the wings and tail; thighs slightly brownish in some specimens; bill and feet black.

Length (skin), 9.25; wing, 5; tail, 4; tarsus, 1.05; bill, .75.

HABITAT. Cuba.

FAMILY CORVIDÆ.

GENUS Corvus LINN.

Corvus LINNÆUS, Syst. Nat. I, p. 155 (1766).

Corvus leucognaphalus DAUD.

Corvus leucognaphalus DAUD. Tr. d'Orn. II, p. 231 (1800).—SALLÉ, P. Z. S. 1857, p. 232.—TAYLOR, Ibis, 1864, p. 168.—BRYANT, Pr. Bost. Soc. Nat. Hist. XI, p. 94 (1866).—SUNDEV. Oefv. K. Vet. Akad. Förh. 1869, p. 598.—BD. BWR. & RIDGW. Hist. N. Am. Bds.

II, p. 234 (1874).—SCL. & SALV. Nom. Avium Neotr. p. 40 (1873).—GUNDL. Anal. Soc. Esp. Hist. Nat. VII, p. 214 (1878).—CORY, Bull. Nutt. Orn. Club, VI, p. 153 (1881); *ib.* Bds. Haiti & San Domingo, p. 74 (1885); *ib.* List Bds. W. I. p. 14 (1885).

Frugilegus leucognaphalus GRAY, Handl. Bds. II, p. 13 (1870).

Microcorax leucognaphalus SHARPE, Cat. Bds. Brit. Mus. III, p. 49 (1877).

SP. CHAR. *Male:*—General plumage black, with faint bluish and purple reflections in the light; feathers of the throat having the ends separated in hair-like filaments: basal portion of the body-feathers white; bill and legs black.

The sexes are similar.

Length, 18; wing, 12; tail, 8; tarsus, 2.20; bill, 2.20.

HABITAT. San Domingo and Porto Rico.

Specimens from Porto Rico differ somewhat from those from San Domingo, but I am of the opinion it would not be wise to separate them specifically. It is possible they represent good geographical races. The San Domingo bird is blacker, and shows brighter bluish and purplish reflections when held in the light. If it should be thought best to separate them, I would propose the name *dominicensis* for the San Domingo form.

Corvus jamaicensis GMEL.

Corvus jamaicensis GMEL. Syst. Nat. I, p. 367 (1788).—GOSSE, Bds. Jam. p. 209 (1847).—DENNY, P. Z. S. 1847, p. 38.—ALBRECHT, J. f. O. 1862, p. 202.—SCL. Cat. Am. Bds. p. 146 (1862).—MARCH, Pr. Acad. Nat. Sci. Phila. 1863, p. 300.—SCL. & SALV. Nom. Avium Neotr. p. 40 (1873).—BD. BWR. & RIDGW. Hist. N. Am. Bds. II, p. 234 (1874).—A. & E. NEWTON, Handb. Jamaica, p. 103 (1881).—CORY, List Bds. W. I. p. 14 (1885).

Frugilegus jamaicensis GRAY, Handl. Bds. II, p. 13 (1870).

Microcorax jamaicensis SHARPE, Cat. Bds. Brit. Mus. III, p. 48 (1877).

SP. CHAR. *Male:*—General color very dark brown, blackish brown on head and throat; basal portions of most of the feathers gray; wings and tail dark brown, showing slight purplish reflections when held in the light; bill and legs black.

The sexes are similar.

Length (skin), 15.75; wing, 8.80; tail, 6.20; tarsus, 1.90; bill, 1.85.

HABITAT. Jamaica.

Corvus solitarius WURT.

Corvus solitarius WÜRT. Naumannia, II, p. 55.—BP. Compt. Rend. 37, p. 829.—CORY, Bds. Haiti & San Domingo, p. 75 (1885); *ib.* List Bds. W. I. p. 14 (1885).

Corvus palmarum "WÜRT. Reis. p. 73."

Corvus jamaicensis SALLÉ, P. Z. S. 1857, p. 232.—BRYANT, Pr. Bost. Soc. Nat. Hist. XI, p. 94 (1886).

Frugilegus solitarius GRAY, Handb. Bds. II, p. 13 (1870).

Microcorax solitarius SHARPE, Cat. Bds. Brit. Mus. III, p. 49 (1877).

SP. CHAR. *Male:*—General plumage black, with a purple gloss to the feathers; coverts and primaries black; tail black, outer surface showing a tinge of purple; bill and legs black.

The sexes are similar.

Length, 15; wing, 10; tail, 6; tarsus, 1.75; bill, 1.75.

HABITAT. Haiti and San Domingo.

Corvus nasicus TEMM.

Corvus nasicus TEMM. Pl. Col. II, p. 413 (1820-39).—BREWER, Pr. Bost. Soc. Nat. Hist. VII, p. 307 (1860).—GUNDL. Repert. Fisico-Nat. Cuba, I, p. 290 (1866); *ib.* J. f. O. 1874, p. 137.—BD. BWR. & RIDGW. Hist. N. Am. Bds. II, p. 234 (1874).—CORY, List Bds. W. I. p. 14 (1885).

Corvus americanus LEMB. Aves Cuba, p. 65 (1850).

Corvus jamaicensis CAB. J. f. O. 1856, p. 16.—THIENEM. J. f. O. 1857, p. 152.—GUNDL. J. f. O. 1859, p. 296; *ib.* 1861, p. 414.

Frugilegus nasicus GRAY, Handl. Bds. II, p. 13 (1870).

Microcorax nasicus SHARPE, Cat. Bds. Brit. Mus. III, p. 49 (1877).

SP. CHAR. *Male:*—General plumage glossy black, showing a purplish tinge; basal portion of feathers grayish; nasal bristles short.

The sexes are similar.

Length (skin), 17; wing, 10.75; tail, 7.60; tarsus, 1.90; bill, 2.35.

HABITAT. Cuba.

Corvus minutus GUNDL.

Corvus minutus GUNDL. Journ. Bost. Soc. Nat. Hist. VI, p. 315 (1852).—CAB. J. f. O. 1856, p. 97.—BREWER, Pr. Bost. Soc. Nat. Hist. VII, p. 307 (1860).—GUNDL. Repert. Fisico-Nat. Cuba, I, p. 290 (1866); *ib.* J. f. O. 1874, p. 139.—ALLEN, Bull. Mus. Comp. Zool. II, p. 297.—BD. BWR. & RIDGW. Hist. N. Am. Bds. II, p. 234 (1874).—CORY, List Bds. W. I. p. 14 (1885).

Frugilegus minutus GRAY, Handl. Bds. II, p. 13 (1870).

Colœus minutus SHARPE, Cat. Bds. Brit. Mus. III, p. 29 (1877).

SP. CHAR. *Male:*—Entire plumage glossy black, showing purple reflections on the back and wings; underparts glossy black, the purple reflections slightly perceptible when held in the light; basal portion of feathers on the body smoky gray; bill and feet black.

Length (skin), 15; wing, 10.35; tail, 6; tarsus, 2; bill, 1.80.

HABITAT. Cuba.

"*Cyanocorax pileatus*," recorded from Jamaica, "probably a caged bird escaped," is a South American species. First given by Gosse (Bds. Jam. p. 308, 1847), and cited by later authors.

Corvus ossifragus has been recorded from Cuba, but I find no record of its actual capture. Dr. Gundlach writes me that the bird does not occur there.

FAMILY TYRANNIDÆ.

GENUS **Elainia** SUNDEV.

Elainia SUNDEVALL, Ornithol. System, p. 89 (1836).

Elainia martinica (LINN.).

Muscicapa martinica LINN. Syst. Nat. I, p. 325 (1766).—GMEL. Syst. Nat. I, p. 930 (1788).—LATH. Ind. Orn. II, p. 483 (1790).

? Muscicapa albicapilla VIEILL. Ois. Am. Sept. I, p. 66 (1807).

Myiobius martinicus GRAY, Gen. Bds. I, p. 249, Sp. 27 (1846).

Tyrannula martinica BP. Consp. I, p. 190 (1850).—CASSIN, Pr. Acad. Nat. Sci. Phila. 1860, p. 375.

Elainea riisii SCL. P. Z. S. 1860, p. 313.—NEWTON, Ibis, 1860, p. 307.—GRAY, Handl. Bds. I, p. 352 (1869).—SUNDEV. Oefv. K. Vet. Akad. Förh. 1869, p. 584.—SCL. P. Z. S. 1870, p. 834.

Elainea martinica TAYLOR, Ibis, 1864, p. 169.—GRAY, Handl. Bds. I, p. 352 (1869).—SCL. P. Z. S. 1871, p. 271; *ib.* 1874, p. 175.—PELZ. Ibis, 1873, p. 113.—SCL. & SALV. Nom. Avium Neotr. p. 48 (1873).—LAWR. Pr. U. S. Nat. Mus. I, pp. 59, 191, 270, 257, 458, 487 (1878). ALLEN, Bull. Nutt. Orn. Club, V, p. 166 (1880).—LISTER, Ibis, 1880, p. 41.—GRISDALE, Ibis, 1882, p. 489.—CORY, List Bds. W. I. p. 15 (1885).

SP. CHAR. *Male:*—General plumage above brownish olive; feathers on the head having the basal portions white, forming a concealed white patch on the crown; throat gray; breast gray, slightly tinged with olive; sides, flanks, and crissum pale olive, mixed with whitish on the middle of the belly; under wing-coverts pale yellowish; wings

and tail dark brown, some of the primaries delicately edged with yellowish white on the outer web, more broadly so on the basal portion of the inner webs, secondaries tipped with the same color; wing-coverts tipped with yellowish white, forming two imperfect wing-bands.

The sexes are similar.

Length (skin), 6.50; wing, 3.25; tail, 3; tarsus, .87; bill, .35.

HABITAT. Lesser Antilles.

Elainia fallax SCL.

Elainea fallax SCL. P. Z. S. 1861, p. 76; *ib.* Cat. Am. Bds. p. 217 (1862).—ALBRECHT, J. f. O. 1862, p. 199.—GRAY, Handl. Bds. I, p. 352 (1869).—SCL. & SALV. Nom. Avium Neotr. p. 48 (1873).—A. & E. NEWTON, Handb. Jamaica, p. 107 (1881).—CORY, List Bds. W. I. p. 15 (1885).

SP. CHAR.—"Dusky olive green; wings and tail fuscous, edged externally with olivaceus. The coverts and the secondaries widely margined externally with greenish white; pileum subcrested, interiorly white; beneath yellowish; the throat washed with olivaceus; bill dusky horn color, whitish at base; feet black.

"Length, 5.2; wing, 2.7; tail, 2.5; tarsus, .75." (SCLATER, orig. descr. transl.)

HABITAT. Jamaica.

Elainia cotta GOSSE.

Elainea cotta GOSSE, Ann. N. H. 2d ser. III, p. 257 (1849).—ALBRECHT, J. f. O. 1862, p. 198.—SCL. Cat. Am. Bds. p. 218 (1862).—MARCH, Pr. Acad. Nat. Sci. Phila. 1863, p. 289.—GRAY, Handl. Bds. I, p. 352 (1869).—SCL. & SALV. Nom. Avium Neotr. p. 48 (1873).—A. & E. NEWTON, Handb. Jamaica, p. 107 (1881).—CORY, List Bds. W. I. p. 15 (1885).

SP. CHAR. *Male:*—General plumage above grayish olive; top of head brown; a partially concealed patch of bright yellow on the crown; throat grayish; underparts pale yellowish white; pale yellow on the belly; wings and tail olive brown; secondaries narrowly edged with yellowish.

The sexes are similar.

Length (skin), 5.25; wing, 2.65; tail, 2.40; tarsus, .55; bill, .38.

HABITAT. Jamaica.

GENUS Pitangus SWAINS.

Pitangus SWAINSON, Zool. Journ. III, p. 165 (1828).

Pitangus caudifasciatus (D'ORB.).

Tyrannus caudifasciatus D'ORB. in La Sagra's Hist. Nat. Cuba, Ois. p. 82 (1840).—GOSSE, Bds. Jam. p. 177 (1847).—GUNDL. Journ. Bost. Soc. Nat. Hist. VI, p. 318 (1852).—CAB. J. f. O. 1855, p. 478.—BREWER, Pr. Bost. Soc. Nat. Hist. VII, p. 307 (1860).—MARCH, Pr. Acad. Nat. Sci. Phila. 1863, p. 288.—GUNDL. J. f. O. 1872, p. 424.

Pitangus caudifasciatus SCL. P. Z. S. 1861, p. 76; *ib.* Cat. Am. Bds. p. 222 (1862).—ALBRECHT, J. f. O. 1862, p. 199.—GRAY, Handl. Bds. I, p. 357 (1869).—SCL. & SALV. Nom. Avium Neotr. p. 50 (1873).—A. & E. NEWTON, Handb. Jamaica, p. 107 (1881).—CORY, List Bds. W. I. p. 15 (1885).

SP. CHAR. *Male:*—Top and sides of the head, including the ear-coverts, dark brown; a concealed patch of bright orange yellow; back brownish gray; some specimens showing a slight tinge of rufous on the upper tail-coverts; under wing-coverts very pale yellow; underparts white, slightly tinged with ash on the breast and sides; under tail-coverts white; tail-feathers having the basal half of the inner webs of all except the two central feathers pale yellowish white, and all the feathers narrowly tipped with white; outer tail-feather edged with white on the outer web.

The sexes are similar.

Length (skin), 8; wing, 4; tail, 3.45; tarsus, .88; bill, .90.

HABITAT. Cuba and Jamaica.

Pitangus taylori SCL.

Pitangus taylori SCL. Ibis, 1864, p. 169.—GRAY, Handl. Bds. I, p. 357 (1869).—SCL. & SALV. Nom. Avium Neotr. p. 50 (1873).—CORY, List Bds. W. I. p. 15 (1885).

Tyrannus (*Pitangus*) *taylori* BRYANT, Pr. Bost. Soc. Nat. Hist. X, p. 249 (1866).

Tyrannus taylori SUNDEV. Oefv. K. Vet. Akad. Förh. 1869, p. 599.—GUNDL. Anal. Soc. Esp. Hist. Nat. VII, p. 193 (1878).

SP. CHAR. *Male:*—Upper surface dark olive brown, darkest on the head; concealed portions of the feathers on the crown yellow in front, succeeded by white, forming a crown patch half yellow and half white, variable in different specimens; underparts grayish; throat white; quills and tail dark brown; the primaries showing a faint rufous edging on the basal portion of the outer web, generally lacking on the first, second, and third; inner webs of primaries and secondaries edged with pale yellowish white; under tail-coverts white; tail olive brown; the outer web of the outer primary showing a faint edging of dull white.

The sexes are similar.

Length (skin), 8.50; wing, 4.25; tail, 3.25; tarsus, .75; bill, 90.

HABITAT. Porto Rico.

Pitangus bahamensis BRYANT.

Tyrannus caudifasciatus BRYANT, Pr. Bost. Soc. Nat. Hist. VII, p. 108 (1859).

Pitangus bahamensis BRYANT, Pr. Bost. Soc. Nat. Hist. IX, p. 279 (1864). GRAY, Handl. Bds. I, p. 357 (1869).—CORY, Bds. Bahama I. p. 102 (1880); *ib.* List Bds. W. I. p. 15 (1885).

SP. CHAR. *Male:*—Above gray, with a tinge of olive on the back; top of the head, including the eyes, dark slate color, concealing a patch of bright orange yellow upon the crown; underparts ashy white, shading into an olive tinge upon the flanks, and pale yellow upon the abdomen and crissum; wings dark brown, edged with yellowish white, the coverts with pale brown; under wing-coverts pale yellow; tail dark brown; outer webs of first two and tips of rest brownish white; upper tail-coverts edged with rufous; bill and feet black.

The female is similar to the male.

Length, 8.10; wing, 4.20; tail, 3.50; tarsus, .80; bill, .96.

HABITAT. Bahamas.

Pitangus gabbii LAWR.

Pitangus gabbii LAWR. Ann. N. Y. Lyc. Nat. Hist. XI, p. 288 (1876).—CORY, Bull. Nutt. Orn. Club, VI, p. 153 (1881); *ib.* Bds. Haiti & San Domingo, p. 76 (1885); *ib.* List Bds. W. I. p. 15 (1885).

SP. CHAR. *Male:*—Top of the head and cheeks dark brown, the feathers concealing a patch of bright orange yellow; back brown, lighter than the head, and becoming still lighter towards the rump; wings and tail brown; the primaries heavily edged with rufous on the outer edge; some of the secondaries showing pale white on the edges; wing-coverts and tail-feathers showing rufous edgings; inner webs of primaries and secondaries, and some of the under wing-coverts edged with yellowish white, giving the under surface of the closed wing a pale yellowish white color; entire under surface white; bill and legs black.

The sexes are similar.

Length, 7.50; wing, 4; tail, 3.35; tarsus, .85; bill, .85.

HABITAT. Haiti and San Domingo.

GENUS Empidonax CABAN.

Empidonax CABANIS, "Journ. für Ornith. III, p. 480 (1855)."

Empidonax nanus LAWR.

Empidonax nanus LAWR. Ibis, 1875, p. 386.—CORY, Bds. Haiti & San Domingo, p. 82 (1885); *ib.* List Bds. W. I. p. 15 (1885).

SP. CHAR.—"Above dull greenish olive, darker on the crown, and brighter on the rump; tail dark brown, the outer web of the lateral feather pale fulvous; smaller wing-coverts the color of the back; the middle and larger coverts are brownish black, ending with white, forming two bars across the wings; the quill-feathers are dark brown, the third and fourth primaries are narrowly edged with greyish white, the inner quills, just perceptibly edged with light rufous; under lining of wings very pale yellow; throat greyish white; breast, abdomen, and under tail-coverts pale whitish fulvous; thighs light brown; upper mandible brown, the under, whitish horn color, dusky on the sides; tarsi and toes brownish black.

"The first primary is abnormally short, measuring but 1 5-16 inches; third quill longest; tail emarginate, length, 4⅜ inches; wing, 2 3-16; tail, 2; bill, ⅜; tarsus, 11-16." (LAWR. l. c., orig. descr.)

HABITAT. San Domingo.

Empidonax acadicus (GMEL.).

Muscicapa acadica GMEL. Syst. Nat. I, p. 947 (1788).

Muscicapa pusilla LEMB. Aves Cuba, p. 40 (1850).

Myiarchus pusilla BREWER, Pr. Bost. Soc. Nat. Hist. VII, p. 307 (1860) (Cuba)?

Empidonax acadicus GUNDL. Repert. Fisico-Nat. Cuba, I, p. 240 (1865); *ib.* J. f. O. 1872, p. 427 (Cuba).—CORY, List Bds. W. I. p. 15 (1885).

Recorded from Cuba.

GENUS Contopus CABAN.

Contopus CABANIS, "Journ. für Ornith. III, p. 479 (Nov. 1855).

Contopus pallidus (GOSSE).

Myiobius pallidus GOSSE, Bds. Jam. p. 166 (1847).

Blacicus pallidus SCL. P. Z. S. 1861, p. 77.—ALBRECHT, J. f. O. 1862, p. 199.—GRAY, Handl. Bds. I, p. 363 (1869).

Contopus pallidus SCL. Cat. Am. Bds. p. 231 (1862).—MARCH, Pr. Acad. Nat. Sci. Phila. 1863, p. 290.—SCL. & SALV. Nom. Avium Neotr. p. 52 (1873).—A. & E. NEWTON, Handb. Jamaica, p. 107 (1881).—CORY, List Bds. W. I. p. 15 (1885).

Contopus caribæus var. *pallidus* BD. BWR. & RIDGW. Hist. N. Am. Bds II, p. 351 (1874).

SP. CHAR. *Male:*—General plumage above olive brown, darkest on the head; rump tinged with rufous; wing-coverts edged with rufous, forming two wing-bands; underparts dull grayish olive, slightly.

tinged with rufous; throat pale; wings and tail dark brown; upper mandible dark brown; lower mandible pale.

The sexes are similar.

Length (skin), 5; wing, 2.62; tail, 2.20; tarsus, .60; bill, .45.

HABITAT. Jamaica.

Contopus latirostris (VERR.).

Myiobius latirostris VERR. Nouv. Arch. Mus. Bull. II, p. 22 (1866).—SCL. P. Z. S. 1871, p, 271.

Contopus latirostris SCL. & SALV. Nom. Avium Neotr. p. 52 (1873).—ALLEN, Bull. Nutt. Orn. Club, V, p. 166 (1880).—CORY, List Bds. W. I. p. 15 (1885).

SP. CHAR. *Male:*—General plumage above dark olive; chestnut on the rump and upper tail-coverts; underparts rufous chestnut, palest on the throat; wings and tail dark brown, the latter faintly tipped with buffy white; upper mandible brown; lower mandible yellowish.

The sexes are similar.

Length (skin) 5.25; wing, 2.30; tail, 2.45; tarsus, .38; bill, .40.

HABITAT. Santa Lucia.

Contopus bahamensis (BRYANT).

Empidonax bahamensis BRYANT, Pr. Bost. Soc. Nat. Hist. VII, p. 109 (1859).—GRAY, Handl. Bds. I, p. 361 (1869).

Contopus caribæus var. *bahamensis* BD. BWR. & RIDGW. Hist. N. Am. Bds. II, p. 352 (1874).

Contopus bahamensis CORY, Bds. Bahama I. p. 101 (1880); *ib.* List Bds. W. I. p. 15 (1885).

SP. CHAR. *Male* (winter):—Above brownish olive, becoming darker upon the crown; a nearly complete circle of white around the eye, broken above; lores ashy; below pale yellow, with a faint tinge of olive; wings dark brown; under coverts pale orange yellow; coverts, secondaries, and tertiaries brownish white, the coverts forming two distinct bands upon the wing; tail dark brown, lighter on the outer feathers; legs and upper mandible black; lower mandible pale, becoming darker at tip. One specimen taken had the yellow of the breast much brighter and deeper, the crissum much brighter, the olive markings heavier, and the under wing-coverts *pinkish*.

Female resembles the male.

Length, 5.35; wing, 2.80; tail, 2.60; tarsus, .58; bill, .60.

HABITAT. Bahamas.

Contopus hispaniolensis (BRYANT).

Tyrannula carribæa var. *hispaniolensis* BRYANT, Pr. Bost. Soc. Nat. Hist. XI, p. 91 (1866).
Blacicus caribæus var. *hispaniolensis* GRAY, Handl. Bds. I. p. 363 (1869).
Contopus carribæus var. *hispaniolensis* BD. BWR. & RIDGW. Hist. N. Am. Bds. II, p. 351 (1874).
Contopus frazeri CORY, Bull. Nutt. Orn. Club, VIII, p. 94 (1883).
Sayornis dominicensis CORY, Bull. Nutt. Orn. Club, VIII, p. 95 (1883).
Contopus hispaniolensis CORY, Bds. Haiti & San Domingo, p. 81 (1885); *ib.* List Bds. W. I. p. 15 (1885).

SP. CHAR. *Male:*—General plumage grayish olive; feathers of the crown dark brown, edged with olive; throat ashy, becoming olive on the sides of the breast, and yellowish brown on the abdomen and crissum; wing-coverts pale at the tips, forming two very dull wing-bands; secondaries very narrowly edged with pale brownish white; tail brown; under wing-coverts pale yellowish brown.

The sexes are similar.

Length, 5.50; wing, 3; tail, 2.70; tarsus, .58; bill, .52.

HABITAT. Haiti and San Domingo.

Contopus virens (LINN.).

Muscicapa virens LINN. Syst. Nat. I, p. 327 (1766). — D'ORB. in La Sagra's Hist. Nat. Cuba, Ois. p. 86 (1840).
Myiarchus virens BREWER, Pr. Bost. Soc. Nat. Hist. VII, p. 307 (1860) (Cuba).
Contopus virens GUNDL. Repert. Fisico-Nat. Cuba, I, p. 239 (1865); *ib.* J. f. O. 1872, p. 424 (Cuba).—CORY, List Bds. W. I. p. 15 (1885).

Accidental in Cuba.

GENUS Sayornis BONAP.

Sayornis BONAPARTE, "Coll. Delattre, p. 87 (1854)."

Sayornis phœbe (LATH.).

Muscicapa phœbe LATH. Ind. Orn. II, p. 489 (1790).
Muscicapa fusca GMEL. Syst. Nat. I, p. 931 (1788).—LEMB. Aves Cuba, p. 41 (1850).
Muscicapa lembeyei GUNDL. Journ. Bost. Soc. Nat. Hist. VI, p. 314 (1852) (Cuba).
Aulanax fuscus GUNDL. J. f. O. 1856, p. 1 (Cuba).
Myiarchus lembeyii BREWER, Pr. Bost Soc. Nat. Hist. VII, p. 306 (1860) (Cuba).

Aulanax lembeyei GUNDL. Repert. Fisico-Nat. Cuba, I, p. 240 (1865); *ib.* J. f. O. 1872, p. 427 (Cuba).

Sayornis fusca CORY, List Bds. W. I. p. 15 (1885).

Recorded from Cuba.

GENUS **Myiarchus** CABAN.

Myiarchus CABANIS, "Fauna Peruana, 1844–46, p. 152."

Myiarchus validus CAB.

Tyrannus crinitus GOSSE, Bds. Jam. p. 186 (1847).

Tyrannula gossii BP. Consp. I, p. 186 (1850).—KAUP. P. Z. S. 1851, p. 53.

Myionax validus CAB. et HEIN. Mus. Hein. II, p. 78 (1859).

Myiarchus validus CAB. Orn. Not. II, p. 351.—SCL. P. Z. S. 1861, p. 76.—ALBRECHT, J. f. O. 1862, p. 199.—MARCH, Pr. Acad. Nat. Sci. Phila. 1863, p. 288.—SCL. & SALV. Nom. Avium Neotr. p. 52 (1873).—BD. BWR. & RIDGW. Hist. N. Am. Bds. II, p. 331 (1874).—A. & E. NEWTON, Handb. Jamaica, p. 107 (1881).—CORY, List Bds. W. I. p. 15 (1885).

SP. CHAR. *Male:*—General plumage above dark olive; brownish olive on the head; upper tail-coverts rufous; throat gray; belly dull yellow; wings dark brown, the feathers heavily bordered with rufous chestnut; wing-coverts edged with dull rufous; outer tail-feathers pale rufous, second feather having the inner web rufous, the outer web brown, the brown gradually widening on the third and fourth feathers, the central feathers being pale olive brown, faintly edged with rufous.

The sexes are similar.

Length (skin), 8; wing, 4; tail, 4; tarsus, 1; bill, .75.

HABITAT. Jamaica.

Myiarchus stolidus (GOSSE).

Myiobius stolidus GOSSE, Bds. Jam. p. 168 (1847).

Tyrannula stolida KAUP, P. Z. S. 1851, p. 51.

Myiarchus stolidus CAB. J. f. O. 1855, p 479.—SCL. P. Z. S. 1861, p. 77; *ib.* Cat. Am. Bds. p. 234 (1862).—ALBRECHT, J. f. O. 1862, p. 199.—MARCH, Pr. Acad. Nat. Sci. Phila. 1863, p. 288.—SCL. & SALV. Nom. Avium Neotr. p. 52 (1873).—A. & E. NEWTON, Handb. Jamaica, p. 107 (1881).—CORY, List Bds. W. I. p. 15 (1885).

Kaupornis stolidus GRAY, Handl. Bds. I, p. 358 (1869).

SP. CHAR. *Male:*—Head dark brown, shading into grayish olive on the back; throat grayish; belly and under tail-coverts dull yellow; wings brown; primaries showing a very slight tinge of rufous on

the edges of the basal half of the outer webs; secondaries edged with dull white; under wing-coverts pale yellow; tail brown, the second feather slightly edged with rufous on the inner web, heavier on the third and fourth.

The sexes are similar.

Length (skin), 7.25; wing, 3.50; tail, 3.25; tarsus. 85; bill, .75.

HABITAT. Jamaica.

This species differs from *M. phœbe* by the brighter yellow of the belly and in being very slightly larger.

Myiarchus phœbe (D'ORB.).

Tyrannus phœbe D'ORB. in La Sagra's Hist. Nat. Cuba, Ois. p. 84 (1840).
Muscicapa sagræ, GUNDL. Journ. Bost. Soc. Nat. Hist. VI, p. 313 (1852).
Myiarchus stolidus, BREWER, Pr. Bost. Soc. Nat. Hist. VII, p. 307 (1860). —GUNDL. Repert. Fisico-Nat. Cuba, I, p. 239 (1865).
Tyrannula (*Myiarchus*) *stolida* (var. *lucaysiensis*) BRYANT, Pr. Bost. Soc. Nat. Hist. XI, p. 66 (1866).
Myiarchus phœbe GRAY, Handl. Bds. I, p. 358 (1869).—SCL. & SALV. Nom. Avium Neotr. p. 52 (1873).—CORY, List Bds. W. I. p. 15 (1885).
Myiarchus stolidus var. *phœbe* COUES, Pr. Acad. Nat. Sci. Phila. 1872, p. 78.—BD. BWR. & RIDGW. Hist. N. Am. Bds. II, p. 332 (1874).
Myiarchus sagræ GUNDL. J. f. O. 1872, p. 424.
Myiarchus stolidus var. *leucaysiensis* CORY, Bds. Bahama I. p. 100 (1880).

SP. CHAR. *Male:*—Above brownish olive, becoming darker upon the head, and shading into rufous on the rump; underparts ashy white, shading into yellowish upon the abdomen and crissum; wings dark brown, the coverts tipped and edged with dull white, forming two wing-bands; the basal half of the outer webs of the primaries, except the first two, edged with rufous; some of the secondaries edged with white; under wing-coverts pale yellowish white; tail dark brown, the feathers bordered with rufous upon the inner webs, very faintly upon the two central ones; legs and bill black.

Length (skin), 7.20; wing, 3.25; tail, 3.20; tarsus, .75; bill, .65.

HABITAT. Cuba and Bahamas.

This species differs from *M. dominicensis* in lacking the bright rufous edging on the primaries. Both *M. stolidus* and *M. dominicensis* have the belly yellow instead of dull white, as in *M. phœbe*.

Myiarchus antillarum (BRYANT).

Tyrannus (*Myiarchus*) *antillarum* BRYANT, Pr. Bost. Soc. Nat. Hist. X, p. 249 (1866).

Myiarchas antillarum SUNDEV. Oefv. K. Vet. Akad. Förh. 1869, p. 599?—GRAY, Handl. Bds. I, p. 364 (1869).—SCL. & SALV. Nom. Avium Neotr. p. 52 (1873).—GUNDL. Anal. Soc. Esp. Hist. Nat. VII, p. 194 (1878).—CORY, List Bds. W. I. p. 15 (1885).

Myiarchus stolidus var. *antillarum* COUES, Pr. Acad. Nat. Sci. Phila. 1872, p. 79.—BD. BWR. & RIDGW. Hist. N. Am. Bds. II, p. 332 (1874).

SP. CHAR. *Male:*—Top of head olive brown, shading into grayish olive on the back; rump slightly tinged with rufous; throat and breast ashy gray; belly white; a faint tinge of yellowish white on the crissum; quills and tail dark brown, showing a slight rufous edging; secondaries edged with dull white; a narrow mark of pale rufous tipping the inner webs of some of the tail-feathers.

The sexes are similar.

Length (skin), 7; wing, 3; tail, 3; tarsus, .85; bill, .65.

HABITAT. Porto Rico.

This species differs from *M. dominicensis* by the absence of the rufous tail-markings and in the belly being white. It is nearest allied to *M. phœbe*, and closely resembles that species, but is easily distinguished from it by the absence of the broad rufous edging on the inner webs of the tail-feathers. *M. phœbe* also shows a tinge of yellow on the belly, which is faint or wanting in *M. antillarum*.

Myiarchus oberi LAWR.

Myiarchus erythrocercus SCL. P. Z. S. 1871, p. 271.

Myiarchus oberi LAWR. Ann. N. Y. Acad. Sci. I, p. 48 (1878); *ib.* Pr. U. S. Nat. Mus. I, pp. 59, 191, 217, 487 (1878).—ALLEN, Bull. Nutt. Orn. Club, V, p. 166 (1880).—SCL. Ibis, 1880, p. 74.—CORY, List Bds. W. I. p. 15 (1885).

SP. CHAR. *Male:*—"Pileum, nape, and sides of the head dark umber-brown upper plumage dark olive-brown, upper tail-coverts edged with dull ferruginous; two middle tail-feathers blackish brown, the other feathers are colored the same, except on the outer two-thirds of the inner webs, where they are bright ferruginous; outer web of lateral feather and ends of the others, ash color; quills brownish black, the primaries narrowly edged with dark ferruginous; the outer secondaries are margined with very pale rufous, and the other secondaries with pale yellowish white; wing-coverts dark brown, ending with pale ashy tinged with rufous; under wing-coverts pale, dull yellow; inner margins of quills light salmon-color; lores, throat, upper part

of breast and sides clear bluish-gray, lower part of breast, abdomen and under tail-coverts pale yellow; bill and feet black.

"Length, 8⅝ in.; wing, 3⅞; tail, 3⅝; tarsus, ⅞; bill from front, 13-16.

"The female does not differ in plumage from the male." (LAWR. l. c., orig. descr.)

HABITAT. St. Vincent, Dominica, Santa Lucia, and Grenada.

Myiarchus sclateri LAWR.

Myiarchus sclateri LAWR. Pr. U. S. Nat. Mus. I, p. 357 (1878).—CORY, List Bds. W. I. p. 15 (1885).

SP. CHAR. *Male:*—"The upper plumage is deep dark olive, the head above blackish brown. Unfortunately, the only feathers left in the tail are the outer four on one side; the outermost two are dark brown and without rufous edgings on the inner webs; the other two feathers are brownish-black, with their inner webs edged with light rufous for about one-quarter their width; quills dark brown, their inner webs bordered with pale salmon-color; wing-coverts edged with dull white; under wing-coverts light ash, with just a tinge of yellow; throat and breast of a clear cinereous gray; abdomen and under tail-coverts dull pale yellow; sides cinereous; bill and feet black.

"Length (fresh), 7½ in.; wing, 3¾; tail, 3½; tarsus, 1; middle toe and claw, 15-16; hind toe to end of claw, ⅝." (LAWR. l. c., orig. descr.)

HABITAT. Martinique.

Myiarchus dominicensis (BRYANT).

Tyrannula stolida var. *dominicensis* BRYANT, Pr. Bost. Soc. Nat. Hist. XI. p. 90 (1866).

Myiarchus stolidus var. *dominicensis* GRAY, Handl. Bds. I, p. 358 (1881).

Myiarchus stolidus CORY, Bull. Nutt. Orn. Club, VI, p. 153 (1881).

Myiarchus ruficaudatus CORY, Bull. Nutt. Orn. Club, VIII, p. 95 (1883).

Myiarchus dominicensis CORY, Bds. Haiti & San Domingo, p. 79 (1885); *ib.* List Bds. W. I. p. 15 (1885).

SP. CHAR. *Male:*—Crown dark olive brown, becoming lighter on the back, and showing a more decided grayish tinge; breast ashy; belly, crissum, and under wing-coverts pale yellow; wing-coverts edged with brownish white, forming two dull wing-bands; tertials broadly edged with yellowish white; primaries, except the first, narrowly edged with rufous on the outer web, showing a broader and much paler edging of the same color on the inner webs of the same feathers; two central tail-feathers dark brown, all the rest having more than half of the inner web rufous to the tip; bill and feet black.

The sexes are similar.

Length, 6.50; wing, 3.10; tail, 3; tarsus, .85; bill, .75.

HABITAT. Haiti and San Domingo.

Myiarchus crinitus (LINN.).

Muscicapa crinita LINN. Syst. Nat. I, p. 325 (1766).
Myiarchus crinitus CAB. J. f. O. 1855, p. 479 (Cuba).—GUNDL. Repert. Fisico-Nat. Cuba, I, p. 239 (1865); *ib.* J. f. O. 1872, p. 426 (Cuba).—COUES, Pr. Acad. Nat. Sci. Phila. 1872, p. 63 (Cuba).
Tyrannus crinitus BREWER, Pr. Bost. Soc. Nat. Hist. VII, p. 307 (1860) (Cuba).

Accidental to Cuba.

GENUS Blacicus CABAN.

Blacicus CABANIS, J. f. O. 1885, p. 480.

Blacicus barbirostris (SWAINS.).

Tyrannula barbirosiris SWAINS. Phil. Mag. 1827, p. 367.
Myiobius tristis GOSSE, Bds. Jam. p. 167 (1847).—ALBRECHT, J. f. O. 1862, p. 199.
Blacicus tristis CAB. J. f. O. 1855, p. 480.—SCL. Cat. Am. Bds. p. 324 (1862).—MARCH, Pr. Acad. Nat. Sci. Phila. 1863, p. 290.—GRAY, Handl. Bds. I, p. 363 (1869).
Blacicus barbirostris, SCL. P. Z. S. 1871, p. 85.—SCL. & SALV. Nom. Avium Neotr. p. 53 (1873).—A. & E. NEWTON, Handb. Jamaica, p. 108 (1881).—CORY, List Bds. W. I. p. 15 (1885).

SP. CHAR. *Male*:—Top of the head dark brown; pale brownish olive on the back; a faint tinge of rufous on the upper tail-coverts; throat gray; rest of underparts pale yellow; wings and tail dark brown; the secondaries and tail-feathers with pale edgings.

The sexes are similar.

Length (skin), 5.75; wing, 2.75; tail, 2.50; tarsus, .75; bill, .55.

HABITAT. Jamaica.

Blacicus caribæus (D'ORB.).

Muscipeta caribæa D'ORB. in La Sagra's Hist. Nat. Cuba, Ois. p. 92 (1840).—GUNDL. Journ. Bost. Soc. Nat. Hist. VI, p. 316 (1852).
Blacicus caribæus BREWER, Pr. Bost. Soc. Nat. Hist. VII, p. 307 (1860).—GUNDL. Repert Fisico-Nat. Cuba, I, p. 240 (1865); *ib.* J. f. O. 1872, p. 426.—GRAY, Handl. Bds. I, p. 363 (1869).—SCL. & SALV. Nom. Avium Neotr. p. 53 (1873).—CORY, List Bds. W. I. p. 15 (1885).

SP. CHAR. *Male:*—Top of head brownish olive, the feathers showing a narrow streak of dark brown on the shafts, rest of upper plumage dull olive; throat gray, with a faint tinge of yellowish near the

breast; belly dull orange rufous, shading into olive on the sides and flanks; quills and tail dark brown; the secondaries with pale edges.

The sexes are similar.

Length (skin), 6; wing, 2.75; tail, 2.25; tarsus, .60; bill, .60.

HABITAT. Cuba.

Blacicus brunneicapillus LAWR.

Blacicus bruneicapillus LAWR. Ann. N. Y. Acad. Sci. I, p. 161 (1878); *ib.* Pr. U. S. Nat. Mus. I, pp. 59, 487 (1878).—CORY, List Bds. W. I. p. 15 (1885).

SP. CHAR. *Male:*—Top of head dark brown; back dull brown, tinged with olive; throat grayish, tinged with rufous on the breast, and becoming pale rufus brown on the belly and under tail tail-coverts; wings and tail brown.

The sexes are similar.

Length (skin), 5.25; wing, 2.50; tail. 2.45; tarsus, .60; bill, .48.

HABITAT. Dominica.

Blacicus blancoi GUNDL.

Blacicus blancoi GUNDL. J. f. O. 1874, p. 311; *ib.* Anal. Soc. Esp. Hist. Nat. VII, p. 195 (1878).—CORY, List Bds. W. I. p. 15 (1885).

SP. CHAR. *Male:*—Top of the head olive brown, becoming grayish olive on the back; throat dull white; breast and underparts pale rufous; under wing-coverts rufous; wings and tail pale brown; shafts of the tail-feathers reddish brown; upper mandible dark brown; lower mandible pale.

The sexes are similar.

Length (skin), 5.50; wing, 3; tail, 2.50; tarsus, .50; bill, .53.

HABITAT. Porto Rico.

GENUS Tyrannus CUVIER.

Tyrannus "CUVIER Leç. d'Anat. Comp. 1799–1800, tabl. ii."

Tyrannus rostratus SCL.

Tyrannus rostratus SCL. Ibis, 1864, p. 87; *ib.* P. Z. S. 1871, p. 272.—SCL. & SALV. Nom. Avium Neotr. p. 53 (1873).—LAWR. Pr. U. S. Nat. Mus. I, pp. 60, 191, 234, 240, 271, 358 (1878).—RIDGW. Smiths. Misc. Coll. XIX, p. 470 (1880).—ALLEN, Bull. Nutt. Orn. Club, V, p. 196 (1880).—CORY, List Bds. W. I. p. 16 (1885).

SP. CHAR. *Male:*—Bill large and heavy; upper plumage slaty-gray, tinged with brownish on the back; a concealed patch of scarlet-orange on the head; ear-coverts dark; throat dull white, grayish on the breast and sides of the body; belly and under tail-coverts dull white, faintly tinged with yellow; under wing-coverts pale yellowish-white; quills and tail brown; secondaries edged with dull white.

The sexes are similar.

Length (skin), 9; wing, 4.50; tail, 4; tarsus, .72; bill, 1.05; width of bill at base, .60.

HABITAT. Lesser Antilles.

Tyrannus magnirostris D'ORB.

? Tyrannus matutinus VIEILL. Enc. Méth. 1823, p. 850.

Tyrannus magnirostris D'ORB. in La Sagra's Hist. Nat. Cuba, Ois. p. 80 (1840).—SCL. Cat. Am. Bds. p. 236 (1862).—BRYANT, Pr. Bost. Soc. Nat. Hist. XI, p. 66 (1866).—SCL. & SALV. Nom. Avium Neotr. p. 53 (1873).—RIDGW. Smiths. Misc. Coll. XIX, p. 464 (1880).—CORY, Bds. Bahama I. p. 99 (1880); *ib.* List Bds. W. I. p. 16 (1885).

Melittarchus magnirostris CAB. J. f. O. 1855, p. 447.—BREWER, Pr. Bost. Soc. Nat. Hist. VII, p. 307 (1860).—GUNDL. Repert. Fisico-Nat. Cuba I, p. 238 (1865); *ib.* J. f. O. 1872, p. 421.

SP. CHAR. *Male:*—Larger than *T. rostratus.* Head dark brown; ear-coverts and cheeks blackish brown; a concealed patch of bright orange on the crown; back slaty-brown; entire underparts white, showing a faint tinge of yellowish in some specimens; under wing-coverts pale yellow; quills and tail brown; some of the primaries and all of the secondaries edged with dull white; wing-coverts edged with dull white.

The sexes are similar.

Length (skin), 10; wing, 5; tail, 4; tarsus, .85; bill, 1.25; width of bill at base, .65.

HABITAT. Cuba. Inagua?

Tyrannus melancholicus VIEILL.

Tyrannus melancholicus VIEILL. Nouv. Dict. XXXV, p. 48, D'ORB. Voy. Ois, p. 311.—SCL. Cat. Am. Bds. p. 235 (1862) —SCL. & SALV. Nom. Avium Neotr. p. 53 (1873).—BD. BWR. & RIDGW. Hist. N. Am. Bds. II, p. 315 (1874).—LAWR. Pr. U. S. Nat. Mus. I, pp. 271, 487 (1878).—RIDGW. Smiths. Misc. Coll. XIX, p. 473 (1880).—CORY, List Bds. W. I. p. 16 (1885).

Muscicapa despotes LICHT. Doubl. p. 55 (1823).

Muscicapa furcata SPIX, Av. Bras. II, p. 15 (1825).

Tyrannus crudelis SWAINS. Quart. Journ. Sc. XX, p. 275 (1826).
Tyrannus furcatus MAX. Beitr. III, p. 884 (1831).
Tyrannus albogularis BURM. Syst. Ueb. II, p. 465.
Laphyctes melancholicus CAB. & HEIN. Mus. Hein. II, p. 76 (1859).

SP. CHAR. *Male:*—Top of head gray; a concealed patch of reddish orange; back dull grayish-olive; throat grayish white, shading into yellowish-olive on the breast, and having the entire rest of underparts bright yellow; under wing-coverts pale yellow; quills and tail brown, showing dirty white edgings on some of the coverts and secondaries.

Length (skin), 8; wing, 4.30; tail, 3.50; tarsus. .75; bill, .75.

HABITAT. Grenada.

Tyrannus dominicensis (GMEL.).

Tyrannus dominicensis BRISS. Orn. II, p. 394, pl. 38, fig. 2 (1760).—RICH. List 1837.—GOSSE, Bds. Jam. p. 169 (1847).—BAIRD, Cat. N. Am. Bds. No. 125 (1869).—NEWTON, Ibis, 1859, p. 146.—CASSIN, Pr. Acad. Nat. Sci. Phila. 1860, p. 375.—ALBRECHT, J. f. O. 1862, p. 199.—SUNDEV. Oefv. K. Vet. Akad. Förh. 1869, pp. 584, 599.—BD. BWR. & RIDGW. Hist. N. Ann. Bds. II, p. 319 (1874).—ALLEN, Bull. Mus. Comp. Zool. II, p. 300 (1881).—RIDGW. Pr. U. S. Nat. Mus. VII, p. 172 (1884).—CORY, Bull. Nutt. Orn. Club, VII, p. 153 (1881); *ib.* Bds. Haiti & San Domingo, p. 77 (1885); *ib.* List Bds. W. I. p. 16 (1885).

Lanius tyrannus var. β. *dominicensis* "GMEL. Syst. Nat. I, p. 202 (1788)."

Tyrannus griseus VEILL. Ois. Am. Sept. I. p. 76, pl. 46 (1807).—SWAINS. Quart. Journ. Sci. XX, p. 276 (1826).—GRAY, Gen. Bds. I, p. 247 (1844).—BP. Consp. I, p. 192 (1850).—SCL. Cat. Am. Bds. p. 236 (1862).—MARCH, Pr. Acad. Nat. Sci. Phila. 1863, p. 287.—TAYLOR, Ibis, 1864, p. 169.—LAWR. Ann. Lyc. N. Y. VIII, p. 99 (1864).—BRYANT, Pr. Bost. Soc. Nat. Hist. XI, p. 90 (1866).—CORY, Bds. Bahama I. p. 99 (1880); *ib.* Bull. Nutt. Orn. Club, VI, p. 153 (1881).—A. & E. NEWTON, Handb. Jamaica, p. 108 (1881).

Tyrannus matutinus "VIEILL. Enc. Méth. p. 850 (1823)."—D'ORB. in La Sagra's Hist. Nat. Cuba, Ois. p. 83 (1840).—GRAY, Gen. Bds. I, p. 247 (1844).—SALLÉ, P. Z. S. 1857, p. 232.

Muscicapa dominicensis AUD. Orn. Biog. II, p. 392, pl. 46 (1834); *ib.* Bds. Am. I, p. 201 (1840).

Tyrannus tiriri "TEMM. Tabl. Méth. p. 24 (1836)."

Tyrannulus dominicensis JARD. Contr. Orn. p. 67 (1850).

Melittarchus dominicensis CAB. J. f. O. 1855, p. 478; *ib.* Mus. Hein. II, p. 80 (1859).—BREWER, Pr. Bost. Soc. Nat. Hist. VII, p. 307 (1860).

Melittarchus griseus GUNDL. J. f. O. 1872, p. 422; *ib.* Anal. Soc. Esp. Hist. Nat. VII, p. 192 (1878).

SP. CHAR. *Male:*—Above grayish-ash, darkest on the head; a dull black patch behind the eye; underparts whitish, ashy on the sides of the breast; wings brown, secondaries and coverts edged with dull white; under wing-coverts pale yellow; tail brown, feathers faintly tipped and edged with dull white; upper tail-coverts edged with pale rufous.

The sexes are similar.

Length, 8.50; wing, 4.40; tail, 4.10; tarsus, .75; bill, .90.

HABITAT. Bahamas, Cuba, Haiti, San Domingo, Jamaica, Porto Rico, St. Thomas, St. Croix, St. Bartholomew, and Sombrero.

Tyrannus tyrannus (LINN.).

Lanius tyrannus LINN. Syst. Nat. p. 94 (1758).

Lanius tyrannus var. *carolinensis* et *ludovicianus* GMEL. Syst. Nat. I, p. 302 (1788).

Tyrannus intrepidus? SALLÉ, P. Z. S. 1857, p. 232 (San Domingo).—BREWER, Pr. Bost. Soc. Nat. Hist. VII, p. 307 (1860) (Cuba); *ib.* BRYANT, XI, p. 90 (1867) (San Domingo).

Tyrannus pipiri GUNDL. J. f. O. 1872, p. 423 (Cuba)?

Tyrannus carolinensis CORY, List Bds. W. I. p. 16 (1855).

Accidental in Cuba. Porto Rico? San Domingo?

Tyrannus sulphurascens Herz. P. V. Württemberg is an undetermined species mentioned by Cabanis (J. f. O. 1857, p. 241). It was originally described as occurring in Cuba and Haiti. Gundlach, in writing of this species (J. f. O. 1871, p. 268), thinks there has been a mistake in the locality.

(*To be continued.*)

BREEDING HABITS OF THE BLACK VULTURE.

BY WALTER HOXIE.

BUZZARD ISLAND lies in a bend between Ladies' Island and Wassa Island, and is about three miles in a direct line from Beaufort, South Carolina. It is about an acre and a half in extent and surrounded by boggy marsh, beyond which, at low tide, stretch

wide flats of gray mud liberally dotted with banks of 'coon oysters.' There is no landing which deserves the dignity of being so called, but at high tide a boat can be brought near enough to either the north or south side to enable a not over nice man to make his way to terra firma. Once there the adventurous collector is a moderately secure prisoner until the next high tide, although I have known one or two instances of parties under the stimulous of sandflies and hunger, making a successful attempt to 'bog' across to Red Bluff on the Ladies' Island shore opposite. On the Wassa side there is a deep channel at all times.

From time immemorial this has been a 'bird island.' A strong odor of guano pervades the air, and the soil is sometimes used as a fertilizer on neighboring plantations. It is a frequent breeding resort of the Snowy Herons, which, however, often desert it for years at a time, as is the wont of this fickle bird. Not so the Vultures. Perhaps a dozen or twenty pairs breed here regularly, the most of them being the Black species (*Catharista atrata*), though a pair or two of the Turkey Buzzards may be observed nearly every year. The portion of the island most frequented by them is the west end. Here, under a dense growth of yucca, I have taken nineteen eggs in one afternoon, and seen at the same time five or six pairs of newly hatched young. There is never the slightest attempt at forming a nest, or even excavating a hollow. The eggs are laid far in under the intertwining stems of the yucca, and in the semi-shadows are quite hard to be seen. The parent birds, however, have a habit of always following the same path in leaving and approaching their precious charge, and after a little experience I learned to distinguish these traces so well that I seldom failed to follow them up and secure the coveted specimens. This track is seldom if ever straight. It winds under and around the armed stems, and, the difference in bulk between a man and a Buzzard being considerable, the pointed leaves find a good many of a fellow's weak points before he reaches his prize. Sometimes, after a half-an-hour's crawling and peering into recesses, being gored and stabbed on every side, the reward is only a pair of uncouth, downy 'squabs,' whose welcome would give a skunk big odds in the defensive art, for, as a friend of mine once said, "Little Buzzards are like a good rule, and work both ways." "Better," quoth I, "for they work both ways at once." What an object F. was, though, on that afternoon! He had come suddenly

upon a well grown pair of chicks, and was so well wedged in among the yucca stems that he could neither make his escape nor defend himself. When he did get out he was streaming with filth, excrement, and blood, and his language was simply awful.

Quite rarely I have found eggs on other parts of the island, and once or twice in completely exposed situations, with not even an attempt to get under the protection of an overhanging bush. Possibly these belonged to young birds which had still much to learn in regard to the ways of house-keeping. I have also occasionally found isolated nests upon the outer Hunting Islands. In these latter cases the eggs have always been easy to find for, being among clean, sylvan surroundings the collector need only follow his nose—if it is a good one—and success is certain.

Both sexes assist in the work of incubation. A week or ten days often elapses between the deposition of the two eggs, but I have never observed over a day's difference in the time of hatching. Indeed, I have never found a bird sitting on a single egg. The period of incubation is very nearly thirty days, but I have not decided this quite to my satisfaction as yet. I have never taken more than two eggs in a set, but my friend, Mr. Alfred Cuthbert, of this place, took a set of three in 1884. I am not certain that two broods are not sometimes raised. I have myself taken eggs only from April 2 to May 26, according to the record now before me, but I have heard of young observed as late as August. No description need be given here of such well known eggs. One of each type is found in every pair, and my theory is that all birds which lay but two eggs at a time produce one male and female offspring. I once raised a pair of young Black Vultures which proved to be male and female. In this case the male was hatched from the long, evenly spotted egg. I cut one of his toes before his companion had emerged, so "those babies were not mixed up." In conclusion let me say that I have never yet found any Vultures' eggs under fallen logs or in hollow stumps. Of course I do not intend to cast any imputation upon the published statements in regard to their nidification in such places, but simply to record the fact that in this locality they fail to take advantage of any such surroundings.

Frogmore, P. O.,
St. Helena Id., S. C.

ON A NEW RACE OF THE FIELD SPARROW FROM TEXAS.

BY ARTHUR P. CHADBOURNE.

Spizella pusilla arenacea, var. nov. WESTERN FIELD SPARROW.

CH. SUBSP.—Similar to *S. pusilla* but with the rufous replaced by brownish-ash, and of slightly larger size, with decidedly longer tail and somewhat heavier bill.

♀ (No. 2141, author's collection. Laredo, Southern Texas, Nov. 12, 1885; F. B. Armstrong, collector): Back and rump pale brownish-ash, the feathers of the back with dark shaft streaks, which, particularly on the scapulars, are edged with light chestnut. Crown with two lateral stripes of pale sandy brown, that are but little darker than the back and are continuous with the ash of the nape, superciliary lines, and middle of the crown. Sides of head brownish-ash, except on the auriculars, which are pale chestnut. Underparts white, tinged with ashy-brown, deepest on the breast, flanks, and under tail-coverts. All wing-feathers edged with pale brown or white. Otherwise similar to *S. pusilla*.

Dimensions: Wing, 2.50; tail, 2.96; culmen, .35.

Migratory or perhaps resident in winter in Southern Texas. Summer habitat unknown.

The bird described above is very different from any eastern specimen I have ever examined. The whole bird is very much paler and the dark streaks on the back less prominent, owing to their lacking the bright rufous edging, and to their being confluent with the lighter ground color. The ash of the throat, sides of the head, flanks and under-tail coverts is tinged with a sandy or brownish-ash instead of rufous, and there is a broad band of ash on the pileum and over the eye. The bill is stouter than in eastern birds and the tail decidedly longer.

Of the six specimens collected at Laredo during the past fall and winter, only two present the characters described above. One of the remaining four is, however, almost a perfect intermediate (No. 2226, author's collection), but the other three can be exactly matched *in color* by Massachusetts skins. All of the Texan skins, ten in number, that I have been able to examine, tend to be less rufescent than eastern birds and to have a longer tail, but unfortunately these characters do not seem to be quite constant, at any rate not in the migratory birds.

S. pusilla arenacea (average of two specimens), tail, 2.88; wing, 2.52.

S. pusilla from Texas (average of ten specimens), tail, 2.86; wing, 2.61.

S. pusilla from Massachusetts (average of ten specimens), tail, 2.62; wing, 2.43.

S. wortheni (type specimen), tail, 2.60; wing, 2.68.

Through the courtesy of the National Museum I have been able to examine the type of *Spizella wortheni*, and I find that it has no trace whatsoever of the median stripe through the crown, or of the chestnut auriculars; there is but one wing-band, and the general effect is as dark as in *S. socialis arizonæ*. The wing is also longer and the tail shorter than in the new race. In short, the two birds seem to have no close relationship.

ON THE AVI-FAUNA OF PINAL COUNTY, WITH REMARKS ON SOME BIRDS OF PIMA AND GILA COUNTIES, ARIZONA.

BY W. E. D. SCOTT.

*With annotations by J. A. Allen.**

I.

BY referring to a map of Arizona the reader will see that Tucson lies on the 111th meridian west of Greenwich and on the 32d parallel of latitude north. The country under consideration in the present paper extends north of Tucson eighty miles, and south forty miles; and, taking the 111th meridian as a median line, twenty-five miles each side of that line gives about its east and west boundaries. This area is therefore one hundred and twenty miles long, in a north and south direction, and fifty miles wide, from east to west. In this parallelogram are one

*A large part of the collection (some 2400 specimens) on which Mr. Scott's paper is based is now in the possession of the American Museum of Natural History, and many other specimens have been submitted to me for inspection. The large series of specimens thus brought together frequently present special points of interest, and the remarks based thereon in the subsequent papers of the present series are added by the kind request of Mr. Scott.—J. A. ALLEN.

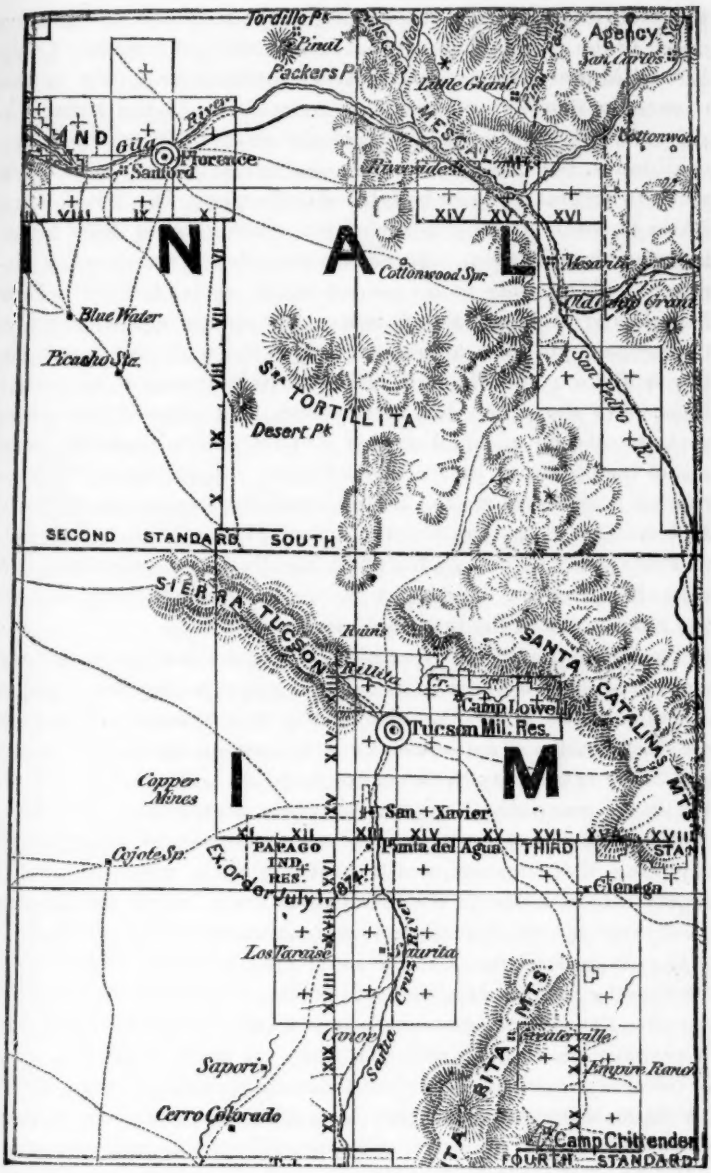
large and two smaller rivers, the Gila being the former and the Santa Cruz and San Pedro the two latter.

Practically one mountain range, the Santa Catalina, forms the backbone of this region. Rising abruptly to the northward and eastward of Tucson, at a distance of from fifteen to twenty miles, it extends in low hills to the Gila River, on the opposite side of which, directly north, are the Mescal Mountains, which terminate in the Pinal range. To the west of Tucson there are no mountains proper in the area under discussion, but very considerable hills break the great plain, and the Barboquivori Mountains are reached at the extreme south-western border. On the southern edge of the area is the Santa Rita range, which is far the most imposing in appearance, though in altitude its highest peaks, as well as those of the Santa Catalinas, do not much exceed eleven thousand feet. Here much work has been done by Mr. H. W. Henshaw, and also by Mr. F. Stephens. I mention this to show the connection of the lists published by these gentlemen with the remarks I shall have presently to offer.

The several points at which most of my material was obtained are Tucson, Florence, Riverside, the San Pedro slope of the Santa Catalinas, and the headwaters of Mineral Creek, which is just outside of Pinal County, in Gila County. In addition, many notes and items have been accumulated on rides and drives between these various points, and now and again specimens procured on such journeys, where anything of special interest happened to occur.

Let me now briefly describe the general environment of each of the places above mentioned, in order to introduce to those of my co-workers who have not been in this region some of the more salient characteristics that obtain here. To make this more clear and intelligible, a map is presented showing some of the great physical features of the country, and to this constant reference will be made in the following pages. The map is based on one compiled for the use of the General Land Office of the United States, in 1879, under J. A. Williamson, Commissioner.

The region about Tucson, it will be noticed, is a great plain, the altitude of which above the sea does not vary greatly from 2300 feet. During many months of the year this plain is arid, but in the region watered by the Santa Cruz River, cultivation by irrigation is largely pursued; and the same remarks apply to



MAP OF PORTIONS OF PINAL AND PIMA COUNTIES, ARIZONA.

the land immediately in the vicinity of the Rillita, a small stream rising in the Santa Catalina range, and running through the Camp Lowell Military Reservation. It is important to notice in this connection that both of these streams only rise to the surface in places, and except in the spring of the year their course is not continuous, but more like a series of streams that vary from a few yards to several miles in length. For instance, the Santa Cruz River is continuously a considerable stream for at least fifteen miles south of Tucson. About two miles below the town it disappears, rising only in occasional small pools, until the Nine Mile Water Hole is reached, where the stream again comes to the surface, and soon afterward is lost again in the desert between Tucson and the Gila River, which stream it ultimately joins. On the other side of the town, and some fifteen miles east, the Rillita, a small stream, flowing down from the summit of the Catalinas, enters Sabino Cañon. In the spring it is continuous from its source to Camp Lowell, but beyond the Military Reservation to the westward it is lost almost at once; though its course may be plainly traced by the dry bed of the stream, no water is to be seen, except in time of great freshets, until it joins the Santa Cruz at the point indicated on the map.

The vegetation of the great plain of Tucson is as varied as one would naturally look for in a region at points well watered and at others almost a desert. Along the two streams mentioned are fine growths of cottonwood and sycamores, the former green almost the entire year, with occasional black walnuts and alders. While the mesquite is found at intervals, throughout the plain, the finest growth is perhaps near or in the region immediately adjoining the streams; and a grove of these trees of special beauty is to be found on the Santa Cruz River, where that stream passes through the Papago Indian Reservation, south of Tucson.

For long stretches on the more arid portions of the plain are found a number of varieties of cholla, a kind of cactus, reaching often the dimensions of the largest shrubs, or smaller trees. It is perhaps needless to add that they are much branched, and wonderfully repellant with their thousand spines, ready to resist the slightest intrusion; yet they form almost the exclusive nesting place and home of a number of species of birds, as will be presently recorded. Such growths are to be met with particularly just outside of Tucson to the eastward.

Wherever the plain is broken up into small hills, at the beginning of the larger mountains beyond, and sometimes reaching well into the plain itself, the giant cactus is abundant, and though it is quite as common in the most arid country, yet it seems to flourish equally near the streams. The groves of this form of cactus are sometimes of vast extent, and such a one exists just east of the Military Reservation of Camp Lowell. Here the cacti attain wonderful size, many being between twenty-five and forty feet high, and are very close together, the outstretched arms of one not unfrequently almost touching its neighbors. They are of the most wierd shapes, varying from a single straight shaft to a most complicated system of branches or arms, reaching in every conceivable direction. The many trunks and arms are from ten inches to three feet in thickness, and have parallel rows of the sharpest spines protecting them, yet the soft fibre of which these colossal cacti are formed is often riddled by the Woodpeckers, and the holes thus made serve afterward, in other seasons, as admirable nesting places for several kinds of Owls and Flycatchers of the genus *Myiarchus*. Two other forms of plant-life, very characteristic of the region, are generally found in the same region as this giant cereus. One is the palo-verde, a peculiar tree, deserving its name from the intense green of the entire bark from the ground upward, and bearing leaves so small that the tree presents an appearance little varied during the year, save in the spring when it blooms with myriads of minute yellow flowers, that give the appearance of a tree of gold. These trees vary in size from small shrubs to trees of twenty-five feet in height, and are found most abundantly, perhaps, on the first mesas of the foothills, and at other similar altitudes. The other form spoken of is the ocotilla, a large kind of *Euphorbia*, bearing in the spring and early summer from the extremity of each of its branches a cluster of vivid scarlet flowers. There is no trunk or body proper to this shrub, which frequently attains a height of fifteen to twenty feet, but the arms or branches start close to the ground from the root stalk, at an angle of about 45°, and rarely send off any smaller branches.

All of these forms of vegetable life, save the cacti and ocotillas, afford sustenance to great bunches of mistletoe—of course evergreen—the fruit of which forms the favorite food of many kinds of birds, and in its deep, tangled masses numberless bird houses are

built. These are the principal forms of trees and shrubs characteristic of the great plain of Tucson, but there are many others too numerous to bring into consideration in the present papers.

The region of the valley of the Gila River at Florence is very similar to that about Tucson, though the mountains are lower and more distant, while the plains back from the river valley proper are more broken, and generally a little higher in average altitude. The road leading to Riverside from Florence passes through this arid plain, and by a gradual ascent reaches the low mountains west of the former place. The plant and tree forms already described are very characteristic of this entire route, and are very abundant the whole way, until reaching the summit of these low mountains. Here the most conspicuous forms are several kinds of yucca, and the aloe (*Agave americana*) or mescal plant, all of which are common. After passing the summit the road again descends into the valley of the Gila, passing through a hilly region cut by many large arroyas, most of which during the rainy season become running streams. The plants of these low hills are chiefly the different forms of mesquite, but the giant cactus is everywhere present.

The valley of the Gila at Riverside is very narrow, high hills and mountains rising abruptly on either side. The Mescal Mountains to the north of the river are really the higher foothills of the Pinal Range, and the lower hills to the south are offshoots of the Santa Catalina Range. Along the river banks are great groves of cottonwoods and sycamores, and back of these a growth of mesquite and cat-claw, running almost immediately into a mixed vegetation consisting of palo-verde, mesquite, giant cacti, chollas, prickly pears, and ocotillas, the valley beginning to break into low hills and mesas just a little back from the river's edge. The altitude of Riverside, as given by the government survey, is about 2200 feet.

The region at the headwaters of Mineral Creek has an altitude approximating 5000 feet. It is some six miles to the eastward of the divide made by the summit of the Pinal Mountains, where collections were made. Here are some large isolated cottonwoods, many sycamores, and on the small plains and mesas varieties of cat-claw and mesquite; junipers of considerable size form groves, and a variety of the hackberry tree is not uncommon. The flow of water in Mineral Creek is even more desul-

tory than in the Rillita, and it rises permanently to the surface only at isolated points, in the form of springs or water holes.

Having described with so much detail the region of the San Pedro slope of the Santa Catalina Mountains in former papers (see Auk, Vol. II, 1885, pp. 1 and 243) it seems hardly necessary to do more here than direct attention to them. To recapitulate briefly, the mountain range is here very wide, the foothills extending far down — for at least eight miles — from the summit of the main range. These hills, though generally abrupt on the sides, are flat on top, thus forming mesas or tablelands of greater or less extent, one ranging above the other. The cañons between these hills are narrow and deep, and in rainy seasons there is a more or less continuous flow of water through them. The cañon in which my house is situated has been alluded to before as having for a considerable distance an ever flowing stream of water.

To return to the consideration of the area as a whole, there are two well defined rainy seasons. One, beginning early in December and lasting till about the middle of March, is a period of storms rather than a rainy season proper. These storms consist of rain or snow, according to the altitude, but snow is of so rare occurrence on the plain of Tucson, that I can find but one record of a snow storm having reached that locality during the past ten years. This season properly corresponds to the winter of the East. It is succeeded by a period of spring, when the deciduous trees regain their foliage, the plains become green and brilliant with wild flowers. In June, most of these grasses and flowers have ripened and died, and the plain is again brown and withered; and save for the scorching heat and the green leaves of the trees, the country has the appearance of winter. This season lasts for from six weeks to two months.

The second rainy season begins generally rather late in July. The rains are then of almost daily occurrence, beginning soon after mid-day and clearing during the night; are almost always accompanied by thunder and lightning, and continue for from three to six weeks. Coincident with this season of rain is a second spring time, when the grass becomes much more luxuriant in its growth than in March and April, and the flowers quite as abundant, but of more enduring varieties. Some of the larger plants, too, as the ocotilla, having lost their first leaves

during the period of heat, now regain them, and sometimes flower again.

The winds are at times during the wet seasons, particularly in the winter, very violent, both in the mountains and on the plains; and even during the intermediate dry intervals, which comprise a series of cloudless days. There are, especially during the early spring, severe storms of wind, accompanied by clouds of dust and fine sand, in the more arid country. The atmosphere is peculiarly dry and clear at all times, save when rain is falling, but is perhaps most noticeably so directly after a rain or wind-storm.

The temperature on the plains ranges from about 28° Fahr. in the coldest of the winter days to 115° in the summer. These figures, of course, indicate the great extremes. At the point where my house is, in the mountains at an altitude of 4580 feet, the mercury has once this winter (1885–86) reached 18°, but this was on the occasion of a storm of unusual severity. The average temperature here of the winter months is about 50°, and of the summer months 85°.

The Pinal, Santa Catalina, and Santa Rita are the only ranges which have pine forests, and these prevail only at the higher altitudes. The characteristic feature of the vegetation below the pine forests is a belt of evergreen oak, which extends down to a little below 4000 feet on the northern, and not much below 4500 feet on the southern slopes.

The birds of this area, as a whole, may be divided into groups which are partly connected with the three greatly differentiated regions here discussed, namely: birds of the valleys and plains; birds of the oak belt; and birds of the pine regions. Though many species range at different times of the year in common over all of these districts, yet there are others, both resident and migratory, which I have never seen outside of the single area they affect. For instance, Bendire's and Palmer's Thrashers are not to be encountered outside of the valleys and lower plains or mesas. Strickland's Woodpecker and the Arizona Jay are always associated in my mind with the oak belt, for I have never met them beyond its limits; and Grace's Warbler, the Red-fronted Warbler, and the Mexican Crossbill are in the same way, so far as I am aware, confined to the pine woods. Yet of these birds—and all are met with near my house, the extremes being not more than

eight miles apart—Bendire's Thrasher is migratory, while many Palmer's Thrashers are resident; Strickland's Woodpecker is migratory, and the Arizona Jay resident; the two Warblers are strictly migratory, and the Crossbill resident. It will be my effort, therefore, to indicate, in as much detail as possible, the distribution locally of at least the more characteristic species.

The migrations here must be considered as occurring regularly in two ways, primarily a north and south migration, and secondarily, though of almost as much import as the other, a vertical migration. There are many species that doubtless come under both heads, but there are others that are as clearly to be classed in the one or the other of these two categories. For examples of each, reference may be made to the details regarding each species which are to follow.

The breeding period of most species, even in the same locality, is prolonged; and though the number of young in a single brood is limited in many species to two or three, it seems probable that in such species the usual aggregate is reached through the greater number of broods raised, which, in cases to be noted, is at least four during a season. Breeding fairly begins by the middle of February, and of birds nesting then, I have found also freshly laid eggs as late as the first of July. The season of breeding in other species which begin to nest later lasts till late in August.

The collections I have made in this area aggregate a little over four thousand birds. At Florence and Riverside, and in the vicinity of these places, in the spring of 1882, four hundred birds were collected and notes made on that part of the territory. At Mineral Creek, in October and November of the same year, about six hundred birds were added. On the San Pedro Slope of the Santa Catalinas, and incidentally in the valley of the San Pedro, and in the pine forests of the Santa Catalinas, during the past two years, somewhat more than three thousand birds have been obtained; and most of the data in regard to migration, nesting period, and the like have been acquired in this region. Though collections have been made in rather a desultory way, at various times and for short periods, about Tucson, and though constant travel in the vicinity has led to the record of many observations, yet I am greatly indebted to Mr. Herbert Brown, of that place, for many notes on species not met with by me, and for much valua-

ble information on the subject in hand, which I shall always mention in connection with his name.

Finally, all the species recorded in the succeeding papers have actually been obtained by either Mr. Brown or myself, and though a number met with by other workers in the same field have escaped our united efforts, the list will be found to embrace several birds not before recorded from Arizona.

(*To be continued.*)

THE RED CROSSBILL (*LOXIA CURVIROSTRA STRICKLANDI*) IN KANSAS.

BY L. L. DYCHE.

WHILE walking along one of the streets near the State University, Lawrence, Kans., on November 1, 1885, I observed a flock of about twenty plump little birds, about the size of English Sparrows. They were hopping about the road, apparently picking up particles of food. Occasionally they would utter a few chirps and fly to a low tree just over the fence, but only to return and alight in the road again. Some of the birds were red, with dark wings, others were of a gray color showing yellowish green blotches. At that moment, while I stood gazing under the influence of the electrical shock of ornithological pleasure produced by my rare discovery, two gentlemen happened to be passing on their way to church. I pressed them hard with the scientific importance of the situation, and insisted on their watching the birds while I rushed for my gun. I returned in less than five minutes and found the men diligently watching some Sparrows in an old tree near by. I mourned this grievous mishap until November 5, when, during a drizzling rain storm from the northeast, I again observed the birds, apparently the same flock, in the top of a tall tree near the University campus. I was so fortunate this time as to secure four good specimens, two males and two females.

HABITS OF THE BIRDS.— The birds remained in this vicinity (apparently within a mile or two of the University grounds) until

January 26, 1886, at which date I saw them for the last time, just at sunrise, sitting on the top of a tree. Notwithstanding the fact that January, 1886, was the coldest month (mean temp. 14.32°) recorded by Professor Snow, who has kept a record for nineteen years, the birds might be seen almost every day feeding on the hemp stalks near the University. During stormy weather they would take shelter in the cultivated evergreens which stood in neighboring yards. At such times it was possible to approach within a few feet of them, and when disturbed they would only fly to the next tree. When the weather was pleasant, and when they were not feeding on the hemp stalks, the birds would spend most of their time flying from the high trees of one grove to those of another. At night they would roost in the evergreens, apparently preferring the pines. I never saw the birds on the ground but once, and that was when I found them in the road. They remained with us almost three months, during which time I collected forty specimens, twenty males and twenty females. The specimens are in the University Museum. All the birds were dissected and carefully examined in order that their food habits might be accurately ascertained; but not a trace of any kind of food except hemp seed was found in the entire forty specimens.

RARITY OF THE BIRDS IN THE STATE.—Although the Crossbills have been common in this locality during the past three months, the species has never been reported, before this winter, as taken in this State. Mr. V. L. Kellogg reports taking a pair December 23, out of a flock of about a dozen, at Emporia, seventy-five miles southwest of Lawrence. Professor D. E. Lantz reports taking two November 21, at Manhattan, about a hundred miles west. On December 25 I saw a small flock thirty miles west, on the Wakarusa, which I think were of the same species.

IDENTITY OF THE SPECIES.—I have not hesitated to call the birds *stricklandi*, because I think the measurements, particularly those of the length of the bill and its depth at base, prove the birds to be the Mexican form beyond all doubt.

Believing that the measurements of such a large number of specimens from one locality will be of interest to ornithologists for comparison, etc., I give the following carefully prepared list of the forty specimens, representing an equal number of males and females:

	Length.	Alar Extent.	Wing.	Bill to Base.	Depth of Bill at Base.	Upper Mandible Turns to the	Sex.
	6.55	10.75	3.55	.75	.42	Right.	♂
	6.40	10.95	3.60	.72	.40	Right.	♂
	6.75	11.75	3.75	.82	.45	Left.	♂
	7.00	11.25	3.63	.76	.45	Right.	♂
	7.00	11.30	3.75	.79	.46	Right.	♂
	6.70	11.00	3.65	.71	.44	Left.	♂
	6.30	10.70	3.58	.71	.43	Right.	♂
	7.00	11.50	3.75	.76	.43	Right.	♂
	6.30	10.80	3.45	.70	.43	Right.	♂
	6.56	11.37	3.79	.77	.46	Left.	♂
	6.88	11.10	3.75	.78	.48	Right.	♂
	6.60	11.20	3.75	.82	.43	Right.	♂
	6.50	11.00	3.60	.75	.44	Left.	♂
	6.70	11.00	3.65	.75	.41	Left.	♂
	6.70	11.70	3.80	.78	.47	Left.	♂
	7.10	11.55	3.75	.78	.47	Left.	♂
	6.83	10.75	3.60	.76	.48	Left.	♂
	6.50	10.75	3.60	.83	.48	Right.	♂
	6.42	10.85	3.50	.75	.40	Right.	♂
	7.00	11.28	3.65	.83	.47	Right.	♂
	6.55	10.25	3.35	.70	.39	Left.	♀
	5.90	10.00	3.28	.65	.42	Right.	♀
	6.55	10.45	3.47	.73	.45	Left.	♀
	6.90	10.75	3.50	.71	.42	Right.	♀
	6.50	10.94	3.52	.77	.44	Left.	♀
	6.95	11.95	3.50	.77	.42	Left.	♀
	6.60	10.50	3.50	.74	.45	Left.	♀
	6.25	10.60	3.45	.66	.40	Right.	♀
	6.35	10.85	3.53	.78	.46	Left.	♀
	6.45	10.62	3.40	.66	.44	Left.	♀
	6.60	11.62	3.40	.72	.42	Right.	♀
	6.00	10.75	3.56	.73	.45	Left.	♀
	6.25	10.50	3.50	.72	.37	Left.	♀
	6.50	10.70	3.50	.76	.44	Right.	♀
	6.12	10.45	3.50	.73	.42	Right.	♀
	6.75	10.75	3.50	.77	.47	Left.	♀
	6.55	10.85	3.50	.76	.43	Left.	♀
	6.53	11.10	3.53	.78	.47	Right.	♀
	6.10	10.50	3.38	.66	.42	Right.	♀
	6.34	10.65	3.42	.70	.43	Left.	♀
Average. ♂	6.689	11.127	3.657	.766	.445	Right. 20	♂
Average. ♀	6.437	10.739	3.464	.725	.430	Left. 20	♀

[Mr. Dyche has very kindly sent me for examination twenty-nine of the Crossbills above referred to. They are essentially similar to Colorado specimens and considerably smaller than *stricklandi* as represented in Southern Arizona. There can be little doubt that they came into Kansas from the westward, probably from the Rocky Mountains north of the New Mexico line. Under Mr. Ridgway's recent arrangement* they would be

* Proc. Biolog. Soc. Washington, Vol. II, pp. 101-107.

referred to *L. c. bendirei*, but this proposed race was rejected by the A. O. U. Committee in drafting the Check List, and, I believe, wisely.

North American Red Crossbills from whatever locality vary excessively in size as well as color. The largest birds occur in Southern Arizona and Mexico, but in a series of twenty specimens from the former region I find a number which are smaller in every respect than the largest Colorado examples, and several which are also smaller than our largest New England birds.

I have recently examined upwards of one hundred of the latter taken in Northern New England at the height of their breeding season (February). All were shot by the same collector in the course of two or three days and in the same locality. The diversity in general size, size and shape of bill, and color, which they present is enough to convince any one that these characters are subject to a wide range of variation and are not dependent, except within broad limits, on geographical considerations. Three or four of the largest birds are larger, in every way, than the small extremes among the Arizona specimens; many would come within the limits of size established by Mr. Ridgway for *bendirei;* while the remainder would be referable to *minor* (= *americana*), the smallest of the three forms. Between the largest and smallest birds there is a perfect connecting series. There is great diversity in respect to the size and shape of the bill. The mandibles are short and heavy in some specimens, long and slender in others. In some the upper and lower mandibles are nearly equal in thickness (a character ascribed to *stricklandi*), in the majority the upper mandible is much the heavier of the two.

Mr. Ridgway gives *bendirei* as occurring in winter, in Massachusetts *Minor* associates with it at all seasons and both breed together in the same woods in Northern New England. Is it possible to separate them into two races under such conditions? I believe not, for it seems obvious that the variations just referred to are either purely individual or dependent on age—it matters little which in the present connection. Nevertheless, upon dividing all the material before me into two series, one of eastern, the other of western birds, I find that the latter *average* considerably larger, with relatively as well as actually stouter bills. There seems to be a reasonably constant difference in color, also, the western females being grayer with less and duller green or yellowish on the back, breast and rump, the males of a deeper, richer red than the eastern birds.

A consistent and satisfactory arrangement, as it seems to me, would be to refer all eastern birds to *minor* (= *americana*), all western ones to *stricklandi*. In any case Mr. Dyche's specimens, as well as all that I have seen from Colorado, are apparently much nearer related to the *stricklandi* of Southern Arizona than they are to the Crossbill of our eastern coniferous forests.— WILLIAM BREWSTER.]

DESCRIPTION OF A NEW NORTH AMERICAN SPECIES OF ARDETTA.

BY CHARLES B. CORY.

Ardetta neoxena, SP. NOV.

SP. CHAR.—Top of the head, back, and tail dark greenish black, showing a green gloss when held in the light. Sides of the head and throat rufous chestnut, the feathers on the back of the neck showing greenish black tips. Breast and underparts nearly uniform rufous chestnut, shading into dull black on the sides; wing-coverts dark rufous chestnut; under wing-coverts paler chestnut. All the remiges entirely slaty plumbeous. Under tail-coverts uniform dull black.

Total length, 10.80; wing, 4.30; tarsus, 1.40; culmen, 1.80.

HABITAT. Florida. Okeechobee region?

In the specimen above described two of the flank feathers on one side are white; but this may be attributed to albinism. There is no trace of a stripe on the sides of the back, as in *A. exilis*. The bird in question is claimed to have been shot in Southwest Florida, and was brought to Tampa with a number of other species, including *A. exilis*, *Anas fulvigula*, and *Ajaja ajaja*. It is without doubt perfectly distinct from any other known species.

RECENT LITERATURE.

Grieve on the Great Auk, or Garefowl. — The bird the portrait of which adorns the title-page of 'The Auk,' has exercised a remarkable attraction on monographers, for not a year has passed since Professor Blasius's exhaustive treatment of the subject, before we receive Mr. Grieve's sumptuous quarto volume on 'The Great Auk, or Garefowl.'*

In order to give the reader an idea of the scope of this work we give the headings of the different chapters into which the book is divided, as follows: I, Introduction; II, The Distribution of the Great Auk—The living bird in its American Habitats; III, The Living Great Auk in its European

* The Great Auk, or Garefowl | (*Alca impennis Linn.*) | Its History, Archæology and Remains | By | Symington Grieve | Edinburgh | London | Thomas C. Jack, 45 Ludgate Hill | Edinburgh: Grange Publishing Works | 1885. 4to., pp. xii + 141 + App. 58. With 4 plates, several wood-cuts, and a map.

Habitats; IV, The Remains of the Great Auk—Introduction to the subject—Discoveries in North America; V, The Remains of the Great Auk in Denmark and Iceland; VI, British Remains of the Great Auk—Keiss in Caithnessshire; VII, British Remains of the Great Auk (*continued*) —Oronsay in Argyllshire; VIII, How was Caistealnan-Gilleau formed, and to what period does it probably belong? IX, English Remains of the Great Auk; X, The Habits of the Garefowl, and the Region it lived in; XI, Information Regarding existing Remains of the Great Auk, with Lists of all recorded Skins, Bones and Eggs—Tables giving the Totals of each Variety of Remains in different Countries—Also Information about Skins, Bones, Eggs, Imitation Remains, and Illustrations of Remains; XII, The uses to which the Great Auk was put by Man; XIII, The Names by which the Great Auk has been known, and their Philology; XIV, The Period during which the Great Auk lived—Conclusion.

To us the chapters treating of the remains preserved in the museums and of the former habitat of this remarkable bird are of principal interest. The author gives the total number of skins known as 79 or 81, the uncertainty being due to doubt whether there be one specimen or none in Iceland, and whether five or six in the United States. Professor Wilh. Blasius enumerates only 77 "mit einiger Sicherheit."* Later in 1884 the same author† made known an additional specimen, that of Mr. Vian in Paris, thus raising the number to 78. It would, therefore, appear as if Mr. Grieve had made at least one new specimen known, but such is not the case, for by some sort of a mistake the author gives *two* specimens as being in the "Smithsonian Institute," Washington, while the fact is, that there is only one specimen in Washington, viz., that in the National Museum under the care of the Smithsonian Institution.

As to the specimen doubtfully referred to Iceland, we can offer no suggestions, but through the kindness of Mr. J. A. Allen we are able to add some valuable information in regard to the example in the New York Museum, and also to the mythical mutilated skin, which "has been said" to be in the same Museum. The origin of the myth that there are two specimens in the New York Museum is evident from the following footnote in Mr. Grieve's book (App. p. 19): "Professor Newton, writing to me on 15th April, 1884, says that D. G. Elliot, according to his own account, bought the specimen without the feet, formerly in Mechlenburg's possession, for the Central Park Museum in New York. Accordingly, there must now be two specimens in that museum, though this point requires still to be cleared up.—W. Blasius." In order to clear up this point I addressed a letter to Mr. D. G. Elliot, who, under date of December 26, 1885, very kindly wrote me as follows: "Yours of 24th is at hand. Somewhere among my papers I have a full account of the specimen of *Alca impennis* now in the Central Park Museum, but I cannot lay my hands upon it at present, and as I am about to leave for the South for a month's absence, I shall have to answer your questions as best I may without it.

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* Journ. f. Orn. 1884, p. 114 and p. 165.

† Tageb'. Naturf. Versamml. Magdeburg, 1884 (p. 321).

"1. I never bought but one specimen.

"2. That is the one in the Museum, and I bought it from Mr. Cook.

"3. I never heard of a second specimen and do not believe there was one.

"4. To the best of my recollection, my specimen was without feet, though I am not positively sure, as it is now a good many years since I purchased it."

Simultaneously I had asked Mr. J. A. Allen, the Curator of Mammals and Birds of the New York Museum, for information, and as his answer goes a good way to explain the case, I take the liberty to reprint it in full, as follows: "There is only one specimen of the Great Auk in the American Museum of Natural History, and this Museum * has never had any other. The reference by Professor Newton to an imperfect specimen, without feet, obtained by Mr. D. G. Elliot, doubtless relates to the Labrador Duck, of which there is here just such a specimen, received from Mr. Elliot. It was mounted by the taxidermist, J. G. Bell, of this city, who supplied the feet of some other Duck. This specimen is still in the museum, and has its defects and the character of the restoration indicated in writing on the bottom of the stand."

To make perfectly sure, I requested Mr. Allen to examine the specimen of the Great Auk carefully, and here is his answer, dated January 4, 1886: "In accordance with your request I have carefully examined the specimen in relation to its feet, and so far as I can judge the feet belong to the specimen, and are not those of some other species, as has been presumed. They are certainly not the feet of any Loon or Duck, or any other water bird with which I am acquainted, and correspond with what I should expect to find the feet of the Great Auk to be. So far as I am able to judge they are genuine. Indeed, I am unable to see any indication that they are not a part of the skin itself."

It seems now unquestionable, that the bird in the New York Museum is not the skin "without the feet and breast plumage," which was sold by Herr Mechlenburg in Flensburg to Siemsen, a merchant in Reykjavik, Iceland (Grieve, App. p. 11). Nor can it be the skin with only one leg, which was in Bryce Wright's possession, if this really be a different one from the above (Journ. f. Ornith. 1884, p. 114). The 'defect skin' is, consequently, not in New York, but the question still remains, what has become of it? Once I thought that I had the solution, as in one of his letters to me Mr. Allen says: "Mr. Cory of Boston, has, I think, a Great Auk in his collection which is in part 'made up.'" I am in the position, however, to positively declare, that this is not the missing skin, either. Mr. Charles B. Cory has, a few moments ago, orally informed me, that what he possesses is only *a fragment of skin of the breast, and a few odd feathers* said to be from the Great Auk, which he bought some years ago of a dealer a little outside of London, and for which he paid £2. So much for the specimens in American Museums. There are, consequently, in this country only four specimens, as enumerated by Dr. Blasius, and not five or six.

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* Referred to above as the Central Park Museum.

In regard to the other specimens mentioned in Mr. Grieve's Monograph, I shall only note, that the specimen which formerly was in Mr. Nicolai Aall's collection in Naes, near Arendal, Norway, is now in the Museum of the University in Christiania, and that it has been remounted recently.

Both in Blasius's list and in that of Mr. Grieve, the "Harvard University Museum" (= Museum of Comparative Zoölogy, Cambridge, Mass.) is credited with the possession of two skeletons "prepared from mummy Great Auks obtained at Funk Island during 1864." Mr. J. A Allen, then curator at the Museum, wrote me under March 18, 1885, as follows:—"We have but *one* specimen of the Great Auk, and that is to be rated as a skeleton. It is, in reality, a so-called 'mummy,' and is from the Funk Islands. Only a portion of the bones have yet been laid bare—one wing and one leg—the rest is still covered with the dried flesh. In some unaccountable way it is commonly and erroneously supposed that we have two of these Great Auk mummies."

Mr. Grieve's Monograph is accompanied by a 'Chart showing the supposed distribution of the Great Auk or Garefowl.' We shall not pass an opinion on the manner in which "the supposed limit of region in which the Great Auk lived" has been drawn generally; but when the author includes the entire Norwegian coast, from the Swedish frontier to North Cape, with all its islands and fjords, he certainly has not been aware of Prof. Robert Collett's investigations, who, as early as 1872, in an article written in the English language (Remarks on the Ornithology of Northern Norway), showed that there was no conclusive evidence of a single example of this species having occurred within the confines of the country. Since then Prof. Collet has made it probable, that the Garefowl has really *once* been seen in Norway, but in a locality considerably to the east of the limits of Mr. Grieve's map (Mitth. Ornith. Ver. Wien, 1884, Nos. 5 and 6).

Altogether Mr. Grieve's book forms an attractive volume, full of interest and useful information. But on looking over the long series of monographs and monographic essays devoted to the Great Auk, we are justified in raising the question: Might not the time, ingenuity, and money invested on them have been applied to other branches of ornithology with greater results? Or, are there not questions of more importance to solve than whether there are 78 or 79 skins of the Great Auk in existence? If the same amount of painstaking scrutiny and exactness had been directed towards elucidating geographical distribution, individual variation, etc. etc., the benefit to our science might have been considerably greater.—L. S.

Meves on the Size and Color of the Eyes of European Birds.—We have just received what appears to be a book filling a gap in ornithological literature, viz., Wilhelm Meves's List of European Birds* with indications

* Die Grösse und Farbe der Augen aller Europäischen Vögel, sowie der in der palæarctischen Region vorkommenden Arten in systematischer Ordnung nach Carl J. Sundevall's Versuch einer natürlichen Aufstellung der Vogelklasse von Wilhelm Meves. Halle a. S., Verlag von Wilhelm Schlüter. (No date on title page, but preface dated "Januar 1886.") 8vo., pp. iv + 74.

of the size and the color of their eyes. The author enumerates 649 'species' (or rather 648, as No. 475 goes out as synomymous with No 482), the names of which are given in Latin and German (often with one or two synonyms appended). In every instance the size of the eye is given in millimeters, separate for ♂ and ♀, if different, followed by a careful statement of the color of the iris and how it varies according to sex and age. About sixty per cent of the statements are based upon the author's own examinations, while for the rest the colors given are taken from the best available sources, and the size estimated, in which case the figures are included in brackets. Anybody who has noticed how our taxidermists generally select eyes at hap-hazard when mounting birds, and how many an otherwise nicely stuffed bird has become an atrocious caricature by the disproportionate size of the eyes, cannot fail to see that this book must be of great service to taxidermists, especially to those of Europe; but until a similar work on American birds be published, it will also be valuable to the taxidermists of this country, for out of a total number of 650 species, Mr. Meves has measured about 150 forms which are absolutely identical or nearly so with birds holding a place in North American ornithological lists. We are happy to say, however, that a similar work is already in preparation for North American birds, giving not only the colors of the irides, but also including measurements of the eyes. Meves's book will at the same time, serve as a handy 'check list' of European (western palæarctic) birds, although the nomenclature is sadly 'eclectic,' arbitrary rejections of old names, because "regelwidrig," as the German ornithologists are pleased to say, being very frequent, and so also the retention of a number of preoccupied names; in some cases the latest innovations have been adopted, while in others the author is "conservative where, *according to Mr. Seebohm*, he ought to be conservative." His splitting of genera seems equally inconsistent (the genus *Picus* is entirely lost, after the fashion of Sundevall, while *Hirundo* is retained). In some instances already corrected mistakes are perpetuated (as *Pœcila kamtschatkensis* Bonap.=Sibirische Sumpfmeise, p. 10), while on the other hand more recent additions to the European Fauna have been overlooked, as, for instance, *Sitta whiteheadi* Sharpe. We note, that like Sundevall, he follows Linnaei 10th edition (1758), but rejects trinomials.—L. S.

'Water Birds of North America'—'A Few Corrections' Rectified.—Dr. J. G. Cooper's long list of so-called 'corrections' to the 'Water-Birds of North America,' in the January number of the 'The Auk,' calls for comment from me in only a few cases, I having exercised no right of revision or supervision whatever over Dr. Brewer's portion of the work. The particular cases with which I am concerned are the following:—

Mareca americana.—Dr. Cooper says that this species "has not been found breeding in the United States." If he will turn to page 622 of my 'Zoology of the 40th Parallel,' he will see that on June 11, 1869, I collected a nest with 10 eggs of this species on Rabbit Island, in the Great Salt Lake.

Pelecanus californicus.—Dr. Cooper's remarks are apparently intended to discredit the supposed distinctness of the Florida and California Brown Pelicans. He says: "The adult plumage obtained by me at San Diego does not differ from that of Florida birds, but the colors of the bill, pouch, etc., differed from both the Florida and Lower California birds, being intermediate, and quite variable." Upon reference to page 143, Vol. II of the 'Water Birds,' it will be seen that *P. californicus* is described as being "Similar to *P. fuscus*, but decidedly larger, the gular sac, *in the breeding season*,* reddish, instead of greenish," etc., it being explicitly stated that the supposed difference in the color of the nape might "not prove sufficiently constant to serve as a diagnostic character." It will be observed that Dr. Cooper does not mention the date or season when his specimens were obtained, thus depriving his statement of "colors of bill, pouch, etc.," of any weight whatever. Much material examined by me since the publication of the 'Water Birds,' while negativing the doubtfully suspected difference in the color of the nape, fully confirms the asserted great and constant difference in size between *P. fuscus* and *P. californicus*, and, so far as the condition of the specimens show anything as to fresh colors of the soft parts, does not disprove the stated difference in this respect.

Cymochorea melania and **C. homochroa.**—There is no more occasion for confounding these exceedingly distinct species than for confounding the Raven and Crow, the difference in size and other particulars being quite as great. The two species are so concisely distinguished in the 'Water Birds' (Vol. II, p. 407), that it is unnecessary to further particularize here.

Puffinus stricklandi.—Dr. Cooper's remarks respecting this species embody several errors of fact as well as wrong deductions. In the first place, nothing can be more certain than that *P. stricklandi* is NOT the young of *P. major*, or that no species of Petrel is, in the same individual, dusky when young and light-colored when adult. (See Proc. U. S. Nat. Mus., Vol. V, p. 658.) In the second place, there is no evidence whatever that *P. major* itself occurs in any part of the Pacific Ocean. In short, it is very evident that the species which Dr. Cooper has mistaken for *P. stricklandi* is *P. griseus*; and it is remarkable that this did not occur to him, since it is carefully described and compared with *P. stricklandi* on the very next page.† To unite under one specific name such obviously distinct species

* Not italicized in the original.

† The length of wing given by Dr. Cooper for his specimen, 12 1-4 inches, is not very greatly in excess of the maximum of the same measurement in *P. griseus*, as given in my diagnosis; and, considering the fact that his measurement was probably taken from a fresh or at least recently skinned specimen, while mine was of a thoroughly dried skin, would readily account for the discrepancy, which might also result from a different method of measurement. There is, however, in my description an unfortunate contradiction of the statement that "*P. griseus* is smaller in all its measurements than *P. stricklandi*" in the figures given immediately above. This is explained by the fact that the statement was written when only the type specimen (representing the minimum measurement) was before me, the measurement of the larger one being subsequently interpolated and the contradictory statement inadvertently overlooked.

as the four forms of *Puffinus* involved in these remarks,* may suit the peculiar views of those who would, for some reason best known to themselves, ignore distinctions which Nature has made; but will Dr. Cooper please explain in what matter this method of subversion of facts," or, as he expresses it, "similar combinations of species," would be "advantageous to the study of the water-birds,"—or any other birds, for that matter?—ROBERT RIDGWAY.

Beckham's Birds of Nelson County, Kentucky.—Mr. Beckham's 'List'† "is based almost entirely" upon his former 'List of the Birds of Bardstown, Nelson County, Ky.,' published in July, 1883, and noticed in the 'Bulletin of the Nuttall Ornithological Club' for October, 1883 (Vol. VIII, pp. 227, 228). Four species only are now added, raising the total number to 171. The present list is essentially a reprint of the earlier one, with some revision of the text, and many changes in the nomenclature. It is quite sumptuously printed, and, the introduction states, was prepared "to accompany Mr. Linny's report on the geology of Nelson County." It is without date, and there is no clue given in the 'separates' to its exact place of publication.—J. A. A.

Beckham on the plumage of Regulus calendula.‡—Respecting the presence or absence of the brightly colored crown-patch in different individuals of this species, Mr. Beckham, after an examination of much material, reaches the following conclusions: "(1) that the female does not have this brightly-colored crown, and (2) that some young autumnal males (very likely a large majority of them) do possess this ornament."—J. A. A.

Lawrence on New Species of Birds from Yucatan.—Mr. Gaumer's explorations in Yucatan continue to supply Mr. Lawrence with ornithological material still yielding novelties. In the first§ of the two papers now noticed a new Pigeon is described (*Engyptila vinaceifulva*) from Temax, Yucatan. It is very unlike any other species of the genus, and its light tints give at first sight a suggestion of partial albinism. There are also in this paper further notes on *Engyptila fulviventris* (originally described as *Leptoptila fulviventris*), and on *Chætura gaumeri*.

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* The only one in the least doubtful being *P. stricklandi*, which by good authority is considered to be the same species as *P. griseus*—a view of its relationships which, it may perhaps be needless to say, I have reasons for not accepting.

† List of the Birds of Nelson County. By Charles Wickliffe Beckham. 4to., pp. 58. Kentucky Geological Survey. No date. [Sept. 1885.]

‡ Remarks on the Plumage of Regulus calendula. By Charles Wickliffe Beckham, Proc. U. S. Nat. Mus., Vol. VIII, No. 40, pp. 625-628, Dec. 7, 1885.

§ Description of a New Species of Bird of the Genus Engyptila, with Notes on two Yucatan Birds. By George N. Lawrence. Ann. N. Y. Acad. Sci., Vol. IV, No. 8, 271-273.

The second paper* contains descriptions of a new Gnatcatcher (*Polioptila albiventris*) and a new Swift (*Chætura peregrinator*). The former finds its nearest ally in *P. nigriceps*, and the latter in *C. gaumeri*.—J. A. A.

Lawrence on Birds new to the Fauna of Gaudeloupe, West Indies.†—Ten species are added to those previously recorded from the Island of Guadeloupe, from specimens transmitted by Dr. St. F. Colardeau, with notes respecting their occurrence. Five of them are North American species of Mniotiltidæ; two others are also North American, the other three being West Indian. The large Kingfisher from this island, previously referred to *Ceryle torquata*, is separated specifically as *C. stictipennis*. It differs from *C. torquata* slightly in various points of coloration, to which, however, it is closely allied.—J. A. A.

Stejneger on preoccupied Generic Names of North American Birds.‡—Dr. Stejneger finds that the generic names hitherto applied to the Golden-eye Ducks are all preoccupied, and he therefore proposes for the group the new generic name *Glaucionetta*, with the following species: *Glaucionetta clangula*, *G. clangula americana*, and *G. islandica*.

The generic name *Canace*, applied to the Spruce Partridge, also proves to have previously used for a genus of insects. Elliot's name *Dendragopus* given to the Dusky Grouse, becomes tenable for the Spruce Partridge, if we consider the two species congeneric; and for the subgeneric name *Canace* Dr. Stejneger proposes the new name *Canachites*.—J. A. A.

Ridgway on the Birds of Cozumel Island, Yucatan.§—In Mr. Ridgway's description of 'Some new Species of Birds from Cozumel Island, Yucatan,' published February 26, 1885 (see Auk, II, p. 294), he promised later a full report upon the collection, and this report forms the paper now under notice. After some preliminary remarks upon the collection, numbering 429 specimens, and upon previous papers relating to the birds of this island, he proceeds to give an annotated list of the species, which number 57. Those previously briefly described as new are here redescribed at length, and a new subspecies (*Centurus rubriventris pygmæus*) is added. Seven species, not represented in the collection, are given on the authority of Mr. Salvin, thus raising the total number of species enumerated to 64. The

* Characters of two New Species of Birds from Yucatan. Ann. N. Y. Acad. Sci., Vol. IV, No. 8, pp. 273, 274.

† List of a few species of Birds new to the Fauna of Gaudeloupe, West Indies, with a Description of a New Species of Ceryle. By George N. Lawrence. Proc. U. S. Nat. Mus., Vol. VIII, No. 39, pp. 621-625, Nov. 3, 1885.

‡ Notes on some apparently preoccupied Ornithological Generic Names. By Leonhard Stejneger. Proc. U. S. Nat. Mus. Vol. VIII, No. 26, pp. 409, 410. Sept. 14, 1885.

§ Catalogue of a collection of Birds made on the Island of Cozumel, Yucatan, by the Naturalists of the U. S. Fish Commission Steamer Albatross, Capt. Z. L. Tanner, Commander. By Robert Ridgway. Proc. U. S. Nat. Mus. Vol. VIII, Nos. 35-37, pp. 560-583, Sept. 30-Oct. 19, 1885.

distribution of the species is given in tabular form at the end of the paper, from which it appears that 19 are peculiar to Cozumel, while 24 are North American, and the remaining 21 tropical American.

As already noticed (Auk, Vol. II, p. 294), a paper on the birds of this island was published by Mr. Salvin in 'The Ibis' for April, 1885, in which several of the species previously given as new by Mr. Ridgway were renamed by Mr. Salvin. The method of Mr. Ridgway's publication of his preliminary paper (in pamphlet form, in advance of the 'Proceedings' of which it formed a part) having been criticised by Mr. Salvin, Mr. Ridgway takes occasion to defend the system of an advance distribution of authors' editions, so often, and, as we believe, properly, resorted to, particularly, but not exclusively, in this country, in cases where otherwise a considerable interval would elapse between the printing and the distribution, or 'publication,' of the papers in the regular issuing of the publications of which they form a part.—J. A. A.

Minor Ornithological Publications.—'Random Notes on Natural History,' a very excellent and well edited monthly journal of natural history, published by Southwick and Jencks of Providence, R. I., contains (Vols. I-II, 1884-85), besides valuable articles on the Mammals, Reptiles, and Plants of Rhode Island, the following original notes and papers on ornithology (Nos. 1003-1036). The unsigned articles are, we are informed, mainly from the pen of Mr. F. T. Jencks, and are so entered in the following index to the ornithological papers.

1003. *Color of Birds' Eyes.* [F. T. Jencks.] *Random Notes on Natural History*, I, No. 1, Jan. 1884, p. 1, No. 2, p. 1,* No. 4, p. 6, No. 6, p. 3, Vol. II, No. 7, p. 56, No. 8, p. 64, No. 10, p. 75.—Under this head is given the color of the iris of various species of birds, as noted from freshly killed specimens. The notes relate to a large number of species of Birds of Prey, Ducks, Gulls, Herons, Woodpeckers, etc., and in many cases include juvenile stages as well as the adult.

1004. *A Very Rare Bird in Rhode Island.* [By F. T. Jencks.] *Ibid.*, p. 6.—"A Young Gyrfalcon, *Hierofalco Gyrfalco*, var. *sacer*" was killed at Point Judith, Oct. 11, 1883, by E. S. Hopkins.

1005. *Brunnick's Guillemot in Rhode Island.* [By F. T. Jencks.] *Ibid.*, p. 6.—One was shot "between Warwick Neck Light and Patience Island, Dec. 26, 1883. The first specimens we have ever known taken in Narragansett Bay." Ten others are reported as taken later. (*Ibid.*, No. 2, p. 8).

1006. *Short-Eared Owl's Nest.* [By F. T. Jencks.] *Ibid.*, p. 8.

1007. *Among the Buff-breasted Sandpipers.* [By F. T. Jencks.] *Ibid.*, No. 2, p. 4.—The record of a day's collecting at Vermilion, Dak.

1008. [*Bird Notes.* By F. T. Jencks.] *Ibid.*, p. 9.—An adult male King Eider (*Somateria spectabilis*) shot at Nayatt Point, Bristol Co., R. I., about Jan. 1, 1884. Purple Finches reported wintering in abundance near Rangeley Lakes in Maine.

* Each number of Volume I is separately paged.

1009. *The Roseate Spoonbill in Florida Rookeries.* [By F. T. Jencks.] *Ibid.*, No. 3, p. 4, No. 5, pp. 4, 5, No. 6, p. 4.—A detailed account of a collector's experience with the Spoonbills in Brevard County, Florida, near Indian River Inlet, in 1874. Describes the nest, eggs, and habits of the bird, with notes incidentally on various other species.

1010. *A New Bird for Rhode Island and the Second for New England.* [By F. T. Jencks.] *Ibid.*, No. 5, p. 8, and No. 6, p. 3.—A male Prothonotary Warbler, killed in South Kingstown, R. I., April 21, 1884, by R. G. Hazard, 2d.

1011. *A Nonpareil Passerina ciris in Rhode Island.* [By F. T. Jencks.] *Ibid.*, No. 5, p. 8.—Shot in Scituate, R. I., "during the summer of 1882," by Daniel Seamans, who also shot, at the same place, a Richardson's Owl, "during the following winter."

1012. *An English Corn Crake in Rhode Island.* [By F. T. Jencks.] *Ibid.*, No 6, p. 3.—Taken at Cranston, R. I., about 1857. Recorded on the authority of Mr. Newton Dexter, who obtained the bird while still in the flesh.

1013. *Great Gray Owl. Spectral Owl. Strix cinera* (sic). [By F. T. Jencks.] *Ibid.*, No. 7, p. 3.—Record of a specimen killed "late in the winter of 1882 and '83," on Fox Island, near Wickford, R. I. Reference is made to another specimen in the collection at Brown University, "said to have been taken in Seekonk, Mass., some twenty years ago," but apparently not previously recorded.

1014. [*Nest of the Marsh Hawk.*] By G. S. A. *Ibid.*, p. 7.—Reference to the character of five nests found in the season of 1884.

1015. *Valuable Notes from Vermont.* [By F. T. Jencks.] *Ibid.*, No. 8, p. 3.—Gives some notes contributed by Mr. C. W. Graham, which include a record of the capture of a Scissor-tailed Flycatcher (*Milvulus forficatus*) at St. Johnsburg, Vt., some time previously. The specimen "now reposes in Dartmouth College." Also refers to the recent capture near the same place of the Kittiwake Gull and the Stilt.

1016. [*Great Horned Owl appropriating the Nests of the Bald Eagle.*] By Frank H. Allen. *Ibid.*, p. 4.

1017. *Feathered Engineers.* What a Couple of Baltimore Orioles did by Setting Their Wits to Work. *Ibid.*, No. 9, p. 4. (From the 'New York Sun.')

1018. [*A Black Vulture in Vermont.*] By [C. W.] Graham. *Ibid.*, p. 4.—Record of a specimen shot at Woodbury, Vt., about July 10, 1884.

1019. [*A Prolific Pair of Song Sparrows.*] By J. N. Clark. *Ibid.*, No. 10, p. 3.

1020. *Remarks on the Migration of Birds in North America.* By C. Hart Merriam, M. D. *Ibid.*, No. 12, pp. 3-5.—Brief report of the work of the A. O. U. Committee on Bird Migration for the year 1884, giving dates respecting the spring migration of five species.

1021. [*Notes on the Sharp-shinned Hawk.*] By J. N. Clark. *Ibid.*, p. 10.

1022. *A New Wrinkle in Taxidermy.* By William Brewster. *Ibid.*, Vol. II, No 1, p 1.—How to easily turn a mounted bird into a skin.

1023. *The Night Heron.* By S. T. Denton. *Ibid.*, No. 2, pp. 9, 10. —Account of one kept in confinement.

1024. *Winter Notes.* [By F. T. Jencks.] *Ibid.*, No. 2, p. 15.—Records a Great Blue Heron taken in Milton, Vt., Dec. 22, 1884, and the capture of two Great Gray Owls at the same place the previous winter. Also a Prairie Warbler killed in Rhode Island, Dec. 4, 1884.

1025. *The Ipswich Sparrow in Rhode Island.* [By F. T. Jencks.] *Ibid.*, No. 3, pp. 17, 18.—Numbers taken on the sandy beach, near Point Judith, Nov. 27, 1884.

1026. *Bird Migration.* By Montague Chamberlain. *Ibid.*, No. 3, p. 18.—On the arrival of the Night Hawk at Prince Edward Island, based on notes of Francis Bain.

1027. *The Color of Birds' Eyes.* By E. J. Smith. *Ibid.*, No. 3, p. 23.—Notes on various species.

1028. [*Winter Notes.* By F. T. Jencks.] *Ibid.*, No. 3, p. 23.—A Snowy Owl taken at Newport, R. I., and Hawk Owls reported taken in Maine, New Hampshire, Vermont, and New Brunswick. (See also p. 34.)

1029. *A Collecting Trip to Cape Cod.* [By F. T. Jencks.] *Ibid.*, No. 4, pp. 25, 26, No. 5, pp. 33, 34.—Interesting notes on various Shore Birds, Gulls, and Terns, as observed at Chatham, Mass., in May, 1883.

1030. *Notes on the White-breasted Nuthatch.* (*Sitta carolinensis.*) By John H. Steele. *Ibid.*, No 4, p. 26.

1030. *Common Cormorants in Rhode Island.* [By F. T. Jencks.] *Ibid.*, No. 5, p. 34.—A specimen taken at Newport, March 27, 1885, and another at Nayatt Point, April 10.

1031. *A Seasonable Diet.* By Thos. W. Fraine. *Ibid.*, No. 5, p. 35. —The Goosander as a fish murderer.

1032. [*The White-cheeked Warbler, Helminthophila leucobronchialis.*] By J. N. Clark. *Ibid.*, No. 6, p. 43.—Record of a specimen seen (but not taken) at Saybrook, Conn, "in the spring of 1880."

1033. *Wingless Birds.* By J. W. Wonfor. *Ibid.*, No. 6, pp. 49-51.—A brief account of Ostriches, Emus, Cassowaries, and Penguins.

1034. *Breeding-Places of Millions of Sea Fowl. Ibid.*, No. 7, pp. 53, 54.—At Bird Rock, Gulf of St. Lawrence. (From the Providence 'Sunday Telegram.')

1035. *Notes on Food of Raptorial Birds.* By Charles Dury. *Ibid.*, No. 8, pp. 57, 58.—Notes on the contents of stomachs of various species of Hawks and Owls. (From Journ. Cincinnati Soc. Nat. Hist. April, 1885.)

1036. *Successful Rearing of some Young Dusky Ducks.* By J. N. Clark. *Ibid.*, No. 12, p. 93.—J. A. A.

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Cochabamba in Bolivia. (Journ. für Orn. Oct. 1885.) (4) Vögel von Celebes. (Braunschweigische Anzeiger, No. 52, 3 März, 1886.)

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GENERAL NOTES.

Discovery of the Nest of Larus rossii in Greenland.—Mr. Paul Müller, son of Herr Sysselmand Müller, the Faröe ornithologist and assistant at the Danish Government establishment of Christianshaab, Greenland, has been fortunate enough to discover a nest of the above rare species. It

was found on June 15 last at Ekomiut, in the district of Christianshaab, and was situated in the midst of the nests of a colony of *Sterna macroura*. The female bird was shot off the nest, which, when found, contained two eggs. Of these one was unfortunately broken, and the other, which was also damaged, is now in the possession of Herr Weller of Copenhagen. It is in color and appearance very similar to the egg of *Larus minutus*, is of a pyriform shape, and measures 44 mm. × 33 mm. This discovery is of some interest, the species, as is well known, having been hitherto of rare occurrence and the breeding habitat unknown.—JOHN J. DALGLEISH, *8 Athole Crescent, Edinburgh.*

A Flock of Chen rossii East of the Rocky Mts.—On the 17th of April, 1885, after several days of stormy weather, with wind from the northwest, accompanied at times by heavy fog and rain, there appeared on a bar in the Missouri River at this place, a large flock of Ross's Snow Geese. In the afternoon of the same day, procuring a boat, we rowed toward the flock, which presented a rather remarkable sight, consisting, as it did, of several thousand individuals squatting closely together along the edge of the bar. Here and there birds were constantly standing up and flapping their wings, then settling down again, all the while a confused gabble, half goose-like, half duck-like, arising from the whole flock. We approached to within a hundred yards or so, when the Geese lightly arose to a considerable height and flew off over the prairie, where they soon alighted and began to feed on the short green grass. While flying, often two or three birds would dart off from the main flock, and, one behind the other, swing around in great curves, quite after the manner of the little Chimney Swift in the East. Apparently these same birds remained about till the 26th of April, long after the storm was over, but they became broken up into several smaller flocks some time before leaving. Some five or six specimens were shot during their stay.—ROBERT S. WILLIAMS, *Great Falls, Montana.*

Capture of a Pair of Wild Hybrid Ducks (Mallard + Muscovy) on Long Island.—Mr. G. C. Morris, of Sag Harbor, New York, had at the annual exhibition of the New York Fanciers' Club, held in New York City, February 3 to 10, 1886, a pair of 'strange Ducks' which no one had been able to name. My attention was directed to them by Mr. Morris, who called upon me at the American Museum of Natural History in relation to them. From the clear account of them he was able to give me, I had no difficulty in deciding as to their character, and an examination of the birds themselves the following day confirmed my identification of them. Unlike most previous examples that have been reported of this interesting cross, they showed no tendency to albinism, there being no abnormal white markings, but presented just the combination of features one would look for in a cross between a wild Mallard and a Muscovy unchanged by domestication. The birds, both male and female, were in perfect plumage, exceedingly beautiful, and presented in nearly equal degree the characteristics of the two species.

I learn from Mr. Morris that the drake was first seen about September 1, 1884, in Poxibogue Pond, in the village of Bridge Hampton, on Long Island, in company with some domestic ducks owned by a Mr. Topping. This gentleman at first tried to shoot him, but he proved to be very wary, and when approached would fly away toward the ocean, about two miles distant. Several other persons saw him and tried unsuccessfully to capture him. He showed a liking for the pond, and finally came regularly every morning to feed with the tame ducks, returning to the ocean at night. One day during a severe thunder squall the tame ducks left the pond and ran into their pen for shelter, the wild bird accompanying them. The owner closed the door and thus captured him. He simply clipped his wing-feathers and let him run with his flock.

The duck, or female hybrid, alighted in Otter Pond, near the upper part of Main Street in the village of Sag Harbor, early one morning in October, 1884. She accompanied some tame ducks on shore, and several men attempted to drive her with the others into a duck pen, but she took wing, struck against a fence, fell back, and was captured before she could recover herself. Her wing was also clipped and she remained a captive.

Several persons who saw the strange birds thought they were of the same species; so the two were brought together. They mated, and the female laid two clutches of eggs and sat upon them, but they proved infertile. They were allowed their liberty, kept together, and associated with a flock of tame ducks. They are now owned, Mr. Morris informs me, by Mr. A. L. Thorne, of Whitestone, Long Island.—J. A. ALLEN, *Am. Mus. Nat. Hist., New York City.*

Tringa damacensis (Horsf.) in Alaska; a Sandpiper new to the North American Fauna.—Among the birds collected by Mr. Chas. H. Townsend, during his trip on the U. S. Revenue Cutter 'Corwin,' is an example of this species, obtained on Otter Island, Bering's Sea, June 8, 1885. The specimen is an adult female, in breeding plumage. An account of this species, embracing full synonymy, a comparison with allied species, critical remarks, and observations on habits, may be found in Dr. Stejneger's 'Ornithological Explorations in Kamtschatka' (Bulletin No. 29, U. S. National Museum), pp. 116-118.—ROBERT RIDGWAY, *Washington, D. C.*

The Masked Bob-white (*Colinus ridgwayi*) in Arizona.—In 'The Auk' for April, 1885 (Vol. II, p. 199), Mr. William Brewster described a new species of Bob-white, under the name *Colinus ridgwayi*, based on a male specimen taken by Mr. F. Stephens in Sonora, Mexico, a few miles south of the Arizona line. Mr. Stephens, according to Mr. Brewster, had "recently examined two specimens which were actually taken in Arizona, thus adding the species to our fauna." Through the kindness of Mr. Herbert Brown, of Tucson, Arizona, I have recently had the opportunity of examining thirteen specimens of this interesting species, all taken within the last few months in the Barboquivari Mountains, Arizona, about

ten miles north of the Mexican boundary. These specimens consist of males and females in nearly equal number, and furnish material for a very satisfactory account of the species, which will form the subject of a special paper soon to appear in the 'Bulletin' of the American Museum of Natural History. The paper will be illustrated with a colored plate, giving figures of both sexes. In this connection I will therefore merely state that the original specimen on which the species was based proves to be rather exceptional in certain features, most of the specimens before me showing a more or less well-marked white superciliary line, which is quite absent in the type. The female proves, rather curiously, to be scarcely distinguishable from the female of *Colinus virginianus texanus*, differing less from this than the latter does from the female of *C. virginianus verus*.

Great credit is due Mr. Brown for his efforts, in securing these specimens he having sent out collectors on several different occasions especially in quest of the species.—J. A. ALLEN, *Am. Mus. Nat. Hist., New York City.*

Discovery of the Breeding Place of McKay's Snowflake (*Plectrophenax hyperboreus*).—In the January 'Auk' (p. 135), I mentioned the fact that the breeding range of this species was "not polar," but on the other hand "considerably south of the Arctic Ocean," at the same time intimating that I was not at liberty to explain the nature of the evidence upon which the statement was based. Since his return from an extended cruise on the U. S. Revenue Cutter 'Corwin,' Mr. Chas. H. Townsend has given me permission to publish the facts bearing on the case. On the 8th of September, 1885, Mr. Townsend, with others of the 'Corwin's' party, landed on Hall Island, in Bering's Sea (lat. about 60° 30′ N., long. 173° W.), a small island lying just north of St. Matthew's Island. Although the greater portion of the day was consumed in the hunting of polar bears, a 1600 lb. specimen of which was shot and skinned, Mr. Townsend had time to get a small number of birds, two of which were *Plectrophenax hyperboreus*, one of them a young bird in first plumage, though full-grown, the other, an adult just moulted into the fall plumage, the moult in fact not quite complete. These specimens will be described in the current volume (Volume IX), of the 'Proceedings' of the U. S. National Museum. These birds were fairly abundant on the island, but much scattered, not having yet collected into flocks. Mr. Townsend regards it as very probable that on St. Matthew's Island, less than five miles to the southward, and many times larger than Hall Island (being, in fact, about thirty miles long, and mountainous), the species may have its centre of abundance. The occurrence of *P. hyperboreus* in winter at St. Michaels and at Nushagak, points on the Alaskan coast to the northeast and southeast, respectively, from St. Matthew's and Hall's Islands, and not at Point Barrow or other portions of northern Alaska, is thus accounted for. It is a very singular circumstance, however, that the Snowflakes breeding on the Prybilov Islands, only two hundred miles to the southward, are *P. nivalis*, as is attested by numerous specimens brought from St. Paul's and St. George's by Mr. Henry W. Elliott, and from Otter Island by Mr. Townsend. It would be

interesting to ascertain which species breeds on the very large island of St. Lawrence, about one hundred and sixty miles north from Hall's Island, although the proximity of the Siberian mainland, which is less than fifty miles distant, may determine the species as *P. nivalis*.—ROBERT RIDGWAY, *Washington, D. C.*

Immature Dress of Melospiza palustris.—A young female of this species, taken at Canton, O., October 16, 1885, differs so much from the published descriptions of the species that it was referred to the father of young ornithologists, Dr. Coues. At his suggestion that the peculiarities of the *young* bird, though known to him, would be of interest, I make the following notes of its points of difference from the adult.

Superciliary line pale but distinct lemon yellow; crown dark chestnut brown, only slightly darker on the forehead, where the black streaks become more numerous, without any of the bright chestnut of the adult; median line ashy, faintly tinged with yellowish; sides of the head and lower throat faintly tinged with yellowish brown, which color extends along the front half of the cervical collar; the black streaks on the back and the bay on the wings less prominent; inner tertiaries edged and tipped with bay; no whitisi..

Having only two specimens from which to draw comparisons, these points are noted with diffidence. The yellow superciliary line, however, being so distinct, and contrary to the usual description of the genus, seems to be worthy of the attention of ornithologists.—R. H. BULLEY, *Canton, O.*

[This is another case of '*Passerculus caboti*'; see Bull. Nutt. Orn. Club, Vol. VIII, 1883, p. 58.—E. C.]

Wintering of the White-throated and Ipswich Sparrows in Maine.—On January 20, 1886, I shot a White-throated Sparrow at Saco, Maine. It seemed to be comfortably settled for the winter in a swampy piece of woods, consisting chiefly of birches, with a scattering of young spruces. It was in dull autumnal plumage, and proved on dissection to be a male.

On January 23, I found two Ipswich Sparrows in the beach grass about half-way between Pine Point and Old Orchard. I managed to secure them both, though not without some difficulty, as they were exceedingly shy.

Taking the lateness of the date and the severe weather which prevailed for two weeks previous into consideration, I believe that both species were undoubtedly wintering. They certainly had not suffered for food, as all three were well feathered and plump, the Whitethroat in particular being quite fat.—JOSEPH L. GOODALE, *Cambridge, Mass.*

Junco hyemalis Nesting in a Bush.—Apropos of my description of the nesting of *Junco carolinensis*,* Mr. S. N. Rhoads, of Haddonsfield,

* Auk, Vol. III, No. 1, Jan. 1886, p. 109.

New Jersey, writes me: "About the year 1874, when traveling through the White Mountains of New Hampshire, I found the nest of *Junco hyemalis* in a green bush (juniper?) about four feet high, on the summit of Mt. Willard. The nest, which was placed about two feet from the ground, contained a set of four eggs, for the safety of which the birds were very solicitous, thus giving me an ample opportunity to identify them."

This is the first authentic instance of bush-nesting on the part of *J. hyemalis* which has come to my knowledge.—WILLIAM BREWSTER, *Cambridge, Mass.*

Peculiar Nest of Chelidon erythrogaster.—A nest of the Barn Swallow having no mud or dirt in its composition may be something of a curiosity. Such a nest was found by me on Cobb's Island, Virginia, July 7, 1884, under the eaves of the porch of the main house in the settlement. It was rather compactly made up of rootlets and grass, and was thickly lined with downy chicken feathers. It was four and a half inches in diameter and one inch in depth. In it were four newly laid eggs. The writer is wholly at a loss to account for this departure from the usual style of architecture adopted by the Barn Swallow; there was certainly no dearth of mud out of which to construct a nest of the more approved type.—HUGH M. SMITH, *National Museum, Washington, D. C.*

The Orange-crowned Warbler in Eastern Massachusetts.—During a visit to Cambridge last autumn, Mr. H. W. Henshaw spent a day with me in rambling through certain fields and woods which we used to ransack together years ago. We had not expected to do much more than enjoy the brilliant autumn coloring and revive old-time associations; but late in the afternoon, as we were passing through a lane in Belmont, Mr. Henshaw had the good fortune to discover and shoot an Orange-crowned Warbler (*Helminthophila celata*) which was feeding in a low birch in company with several Yellow-rumps (*Dendroica coronata*). This specimen, an adult male in unusually fine plumage, is only the second for Middlesex County, and, I believe, the fifth for the State. Through my friend's generosity it has found a final resting place in my collection by the side of the female which I shot at Concord in 1876.* The date of this last capture was September 30, 1885.—WILLIAM BREWSTER, *Cambridge, Mass.*

Seiurus ludovicianus in Maine—A Correction.—The recent death of Prof. C. E. Hamlin makes it necessary to correct an error, which, if he had lived, he intended to have corrected himself.

In his Catalogue of the Birds of Waterville, Maine,† the Large-billed Water-Thrush was included on the evidence of a single specimen (No. 2392, Cambridge Museum Comp. Zoöl.). Professor Hamlin and I re-

* See Bull. N. O. C., Vol. I, Nov., 1886, pp. 94, 95.

† Tenth Annual Report of the Maine Board of Agriculture for 1865, pp. 168–173.

cently examined this bird and found it to be the common Oven-bird (*S. aurocapillus*).

It is only just to Professor Hamlin to state that he should not be held responsible for the error, as he sent a large number of alcoholic specimens to the Cambridge Museum at that time, and after they had been identified, the list of names (among which was (*Seiurus ludovicianus*) was returned to him and by him incorporated in his paper. Nor was the mistake Mr. Allen's, as he was not connected with the Museum until several years later.

This leaves *Seiurus ludovicianus* with but a single record for the State of Maine.—ARTHUR P. CHADBOURNE, *Cambridge, Mass.*

Changes in the Plumage of Geothlypis trichas. — In the interesting review in the October 'Auk' (1885), of the tenth volume of the British Museum Catalogue of Birds, Mr. Allen very appropriately takes occasion to correct the gross error, into which most of the books have fallen, in regard to the winter plumage of the males of so common and extensively distributed a species as *Geothlypis trichas*. The error in question is a statement to the effect that in winter the adult male loses the conspicuous black and ashy markings about the head, and takes on the uniform olivaceous and brownish colors of the upper parts of the female. In making this correction, however, Mr. Allen, I believe, does not go far enough, for according to my observations the males not only never assume the plumage of the female after having once attained the masculine livery, but young birds moult directly into a plumage approaching that of the adult male (which will be indicated in detail farther on), when they begin in August to shed the well-known fluffy 'first plumage,' with its greenish and ochreish tints, brownish wing-coverts, etc.

There are, Mr. Allen states, instances in which the young male has been taken in winter in the female plumage, but these, I think, should be regarded as exceptional. I have examined very carefully the two large series of this bird (including Mr. Brewster's *occidentalis*, which, for the purpose we have in hand, may be 'lumped' with *trichas*) contained in the collection of the National Museum, and in that of Mr. Henshaw, besides ten or a dozen other specimens, amounting altogether to 144 individuals, and have failed to find a single winter male without the adult black and ashy markings. But I did find three spring males with these characters so imperfectly developed as to indicate, probably, that the birds had passed the preceding winter in the plumage of the female.

The changes in plumage when the young male begins his first moult, which occurs in August, in the latitude of Washington, may be briefly summarized as follows:—The feathers of the head and middle of the throat appear to be the first that are lost. The latter are replaced by yellow ones (not so bright, however, as in the adult), which at first are to be seen in linear blotches. Those of the head give place to a new set, of a fine chocolate brown color, shading off into olivaceous towards the nape in most birds, in some, however, extending over almost the whole of the

upper parts. Before these two changes are completed, the first black feathers begin to show themselves in the maxillary region, and they gradually spread into an irregularly shaped patch on the sides of the head and neck. Nearly all of these black feathers are tipped with ash, the amount of which appears to vary with the individual. At this stage the black is quite similar to that which adorns the breast of *G. philadelphia;* and in this plumage the bird is the one described by Audubon (Orn. Biog., I, 1832, 124, pl. 24) as *Sylvia roscoe*, and is very common during the latter part of August and in September. The next step in this somewhat protracted change begins in September, when the black feathers make their appearance on the forehead at the base of the upper mandible, whence they continue to extend until the area usually covered with black is attained; and the border of hoary ash now appears sharply defined against the black mask and the greenish olive and brown of the rest of the upper parts. The ashy tips to the black feathers have now entirely disappeared. A New Orleans specimen (No. 90.665) taken November 22, undoubtedly a young bird of the year, illustrates this phase very perfectly. No. 2782, (Coll. H. W. H.), collected November 1, shows a stage preceding the last; the soft chocolate brown covers the whole back of the head, and the ashy band, which seems to be a very variable character, is very much restricted.

It may be well to state that of the 144 specimens examined of *trichas* and *occidentalis*, 24 of them were young August and autumnal males in various transitional stages of plumage, and there are none of them taken later than August 20 which do not show some traces of the changes above indicated. There is another peculiarity of young fall birds, female as well as male, which seems to be very constant, first pointed out, I believe, by Professor Baird (Rev. Am. Bds. 1864, 221), namely, the much lighter color of the bill as compared with spring birds.

During the past summer and autumn, the writer enjoyed excellent facilities for observing the Yellow-throat in his native haunts. A favorite collecting ground was an old forest-surrounded field, near Ellicott City, Md., through the centre of which ran a brook of considerable size, whose banks were fringed with such a dense and luxuriant growth of bushes and tangled vines as to meet over the middle of the stream, forming, as any 'bird-man' knows, a paradise for Yellow-throats, Chats, and other thicket-loving species. On three or four different occasions during the latter part of August I penetrated this tunnel of verdure, and by employing the well-known 'screeping' device—making a noise-machine out of the back of the hand and the lips—attracted the usual mob of curious, scolding, and anxious little birds. The young Yellow-throats were particularly numerous in these excited assemblages, and once I counted seven young males with the incipient black masks, and two young females in sight at the same time, the most distant of them not twenty feet from the spot where I was sitting. During the following month (September), I found the young males in the transitional plumage quite common in Kentucky, where I collected a good deal.

There is one specimen in the National Museum collection that doubtless deserves special mention in this connection. The label thereof reads as follows:

"66,643. Geothlypis trichas ♂ ad. No. 104. Cleveland, Ohio, May 11, 1874. J. S. Newberry, M. D. Large testicles stated to have been found. Given to Smithsonian Institution by E. Coues."

Taken by itself the label presents nothing remarkable, but tied to the leg of this particular bird it affords us one of those by no means uncommon ornithological puzzles, which, in the language of Dundreary, "no fellow can find out." The bird is in the full spring plumage of the *female*, without a single trace of black or ash about the head.—CHARLES WICKLIFFE BECKHAM, *Washington, D. C.*

Unseasonable Birds on Long Island.—1. **Galeoscoptes carolinensis.**—On December 30, 1882, while passing along one of the streets of our village — Fort Hamilton — my attention was arrested by a bird note, familiar yet strangely out of place at that season — none other than the characteristic cry of the Catbird. I caught sight of the bird a moment later, hopping about in the branches of a lilac bush in a private yard, not a dozen feet from me, so that there was no error in the identification.

2. **Oidema perspicillata.**— During a week's stay at Montauk Point, from July 15 to July 21, 1883, I saw on several occasions a flock of 'Sea Coots' floating on the ocean about 250 or 300 yards from shore. To which of the three species they belonged I could not tell. On June 12, 1884, I saw a flock of at least fifty 'Sea Coots' in the Lower New York Bay, off Coney Island, but the distance was too great to determine the species; but on the 20th of the same month, while sailing in Gravesend Bay, about two miles below Fort Hamilton, we came upon three individuals of *O. perspicillata*. We ran down to within 20 yards of them before they took wing, but as the gun had been left at home, in deference to the ladies, I was unable to secure them.

3. **Harelda glacialis.**— While yatching in North Oyster Bay, Long Island Sound, on July 12, 1884, I shot a fine male 'Old Wife.' The bird was apparently well and uninjured, and was swimming about in a lively manner as we approached. My first shot either missed or only wounded it slightly, for it instantly rose and was flying off rapidly when I killed it with my second barrel. I skinned it, and could not find any marks of old wounds or other injuries. It was in full plumage and differed from the adults usually taken in this latitude by the greater amount of orange brown on the back and scapulars. The dark zone on the breast was also of a lighter shade than usual.—DE L. BERIER, *52 Broadway, New York City.*

Two Additions to the Texas Avi-fauna.—I have taken in Cook County, Texas, the following: *Syrnium nebulosum alleni*, *Turdus fuscescens salicicola*.—G. S. RAGSDALE, *Gainsville, Texas.*

A Partial Albino Hermit Thrush (*Turdus aonalaschkæ pallasii*).—I have a male of this species taken in this vicinity October 27, 1885, which has the top of the head and the back light gray. Below white, the spots on the breast being fairly distinct. Tail and the primaries and secondaries fawn color.—JNO. H. SAGE, *Portland, Conn.*

On two Abnormally Colored Specimens of the Bluebird (*Sialia sialis*).—The United States National Museum has, through the generosity of their respective collectors, come into possession of two adult males of the common Bluebird which differ so much from the normal plumage of that species as to be worthy of special description.

No. 91,303, ♂ ad., collected at Escanaba, Mich., June 6, 1883, by Mr. Wm. Palmer, Washington, D. C., has the color of the upper parts agreeing exactly with that of more richly colored examples in the normal plumage (precisely as in No. 63,366, from Massachusetts, for example*), the tint approaching very nearly to a pure ultramarine. The coloration of the anterior underparts, however, is quite abnormal, all of the cinnamon-colored feathers of the breast, etc., being blue beneath the surface, the feathers of the sides of the breast being chiefly or entirely blue, the latter color largely prevailing, the uniform cinnamon being confined to the middle of the breast and lower central portion of the throat. The posterior lower parts are white, however, as in true *sialis*, and not bluish, as in *mexicana*, and the bill is stout as in *sialis*, the measurements being quite normal.†

No. 107,218, collected in Baltimore Co., Maryland, March 31, 1885, by Mr. A. H. Jennings, of Baltimore, is abnormal only in the color of the upper parts, which are of a very rich uniform azure blue, almost precisely the same shade as in *S. arctica*, but even rather more greenish than in many examples of the latter species. Viewed in a particular light, many of the feathers, especially the rectrices and larger scapulars, show very regular and rather distinct darker bars, or 'water marks.' The shade of blue is quite identical with that of the *S. azurea*, the color being rather richer; but it is a notable fact that the cinnamon-color of the breast, etc., is as intense as in any specimen of normal *S. sialis*, and not of that pale ochrey tint always characteristic of *azurea*. The measurements of this specimen are as follows: Wing, 3.95; tail, 2.70; culmen, .65; tarsus, .80.

In order to show how little variation there is in this species according to locality, I present herewith measurements of several Florida specimens (three of them breeding birds) and examples from extreme northern localities. As to color, it may be remarked that none of the Florida exam-

* Many examples of *S. mexicana* are not appreciably different in shade of blue from the richer colored specimens of *S. sialis*.

† [There is, and has been for many years, a specimen of *Sialia sialis* (No. 9105, ♂, Newtonville, Mass., March 10, 1868,) in the Museum of Comparative Zoölogy at Cambridge, which agrees very closely with the specimen here described by Mr. Ridgway, the whole throat being blue, and all the cinnamon-colored feathers of the breast blue beneath the surface, the blue showing prominently on the slightest disarrangement of the feathers.—J. A. ALLEN.]

ples in the National Museum collection exceed in richness of coloration the average of more northern specimens, No. 63,366, from Massachusetts, being, in fact, more intense in coloration than any of the Florida series.

FLORIDA SPECIMENS.

Museum Number.	Sex and Age.	Locality.	Date.	Wing.	Tail.	Culmen.	Tarsus.
4920	♂ ad.	Florida (Nassau Co.)	(Summer)	4.10	2.90	.67	.80
58345	♂ "	" (Jacksonville).	Dec. 31.	4.00	2.80	.65	.78
81940	♂ "	" (Milton).	March 22.	3.95	2.70	.65	.75
89854	♂ "	" (Gainesville).	(Summer)	4.00	2.70	.65	.75
1,640, H. W. H.	♂ "	" (Cedar Keys).	Dec. 20.	3.90	2.75	.67	.78
			Average.	3.99	2.77	.66	.77

NORTHERN SPECIMENS.

Museum Number.	Sex and Age.	Locality.	Date.	Wing.	Tail.	Culmen.	Tarsus.
61140	♂ ad.	District Columbia.	March 31.	4.05	2.75	.62	.80
83579	♂ "	" "	" 8.	4.00	2.60	.62	—
82580	♂ "	" "	April 11.	4.15	2.75	.65	.80
63366	♂ "	Massachusetts (Needham).	" 19.	3.90	2.60	.65	.80
77179	♂ "	Illinois (Cook Co.).	March 30.	3.95	2.70	.67	.80
89273	♂ "	Hudson's Bay Terr. (Moose Factory).	(Summer)	3.90	2.60	.67	.75
91303	♂ "	Michigan (Escanaba).	June 6.	3.95	2.80	.65	.75
			Average.	3.99	2.69	.65	.78

ROBERT RIDGWAY, *Washington, D. C.*

Another Black Robin.—While looking at the birds in an aviary in Somerville, Mass., a few days since, I noticed an American Robin as dark as a European Blackbird, for which I took it until the owner informed me that it was our Robin taken from the nest, in this neighborhood, by himself. He told me that Robins thus raised in confinement were often thus colored. Is not the melanism to be connected with the peculiar conditions to which the bird is exposed? The aviary is built like a greenhouse, with one side (glass) sloping to the south. It has no artificial heat therein, yet keeps southern birds (as Cardinal Grosbeaks) in good condition. The Robins get no worms except those they may pick up in the aviary.—WALTER FAXON, *Cambridge, Mass.*

Some Additions to the Avi-fauna of Colorado.—Mr. Frank M. Drew, in his admirable paper 'On the Vertical Range of Birds in Colorado' (Auk, Jan., 1885), makes no mention of the following species, and, so far as I know, they are new to Colorado. The notes were obtained by the joint efforts of Mr. A. W. Anthony and the writer.

Spizella socialis. CHIPPING SPARROW.—On May 14, 1882, I first made the acquaintance of this species. Small numbers were seen for a week or ten days during the migration. I did not see any more until May 19, 1884, when they were abundant on the Platte River and congregated in large flocks.

On the night of April 22, of the past spring (1885), we had the heaviest fall of snow of the season at Denver, and it continued to fall for most of the forenoon of the 23d. All the morning I had noticed a number of small birds flying about and on closer examination they proved to be of this species. A few were seen off and on until May 12.

Scolecophagus carolinus. RUSTY BLACKBIRD.—In the collection of Mr. Anthony is a pair of Rusty Grackles which he shot December 17, 1883. They were in a piece of swampy ground, near Denver, and were the only ones seen.

Colaptus auratus 'hybridus.' 'HYBRID FLICKER.'—Specimens of this bird are not uncommon here. Generally seen during the migrations.

Syrnium occidentalis. SPOTTED OWL.—In the collection of Mr. A. W. Anthony is a specimen of this Owl, which he shot either in January or February, 1882. It was in a wet marshy place grown up to coarse grass. The bird seemed to make its home in this locality for some time, as he says he flushed it from the grass on several different occasions during the winter, before he succeeded in shooting it. On corresponding with Mr. C. E. Aiken, of Colorado Springs, we learn that he has taken several specimens which he refers to this species.

Glaucidium gnoma. CALIFORNIA PIGMY OWL.—The earliest specimen of this species is in the possession of a taxidermist of this city, who informs us that it was found dead and frozen under a bank on Clear Creek, in the vicinity of Denver, February 3, 1881. In July, 1884, the writer was camped on Bear Creek, a brawling mountain stream, which winds its way through the cañon of the same name. On the afternoon of the 21st, I crossed the

creek and commenced climbing the rugged side of the mountain, every now and then stopping to rest and listen for some bird-note to guide me. I had been climbing for perhaps half an hour when, on turning to look back, I saw a small, thick-set bird, having the appearance of an Owl, flying along the side of the mountain some distance below me. As the sun was shining brightly I expected he would alight near by, but this he did not seem at all inclined to do, but kept on until lost to sight around a projecting spur of the mountain. Following in his line of flight, I was soon attracted by the chattering of some Mountain Chickadees, and on approaching nearer I found his Owlship in the top of a small spruce with a number of small birds about him. On shooting it, it proved to be of this species. I was unable to tell the sex from dissection, but owing to its large size and coloration I believe it to be a female. The nearest settlement which can be called by the name of town, was Evergreen, three or four miles distant.

Nycticorax nycticorax nævius. BLACK-CROWNED NIGHT HERON.—In the collection of the Denver High School is a specimen of this Heron which is labelled Fort Collins, Colorado, May, 1882. Sex ♂.

Two more specimens—an adult and young bird—are in the possession of a taxidermist of this city, who informs me that they were shot by a ranchman a few miles from the city. They bear no label, but he believes they were taken either in the year 1882 or 1883.

The fourth specimen was brought to me May 12, 1885, and was a full plumaged male in good condition. It was also shot by a ranchman, about twenty miles from Denver.

Charadrius squatarola. BLACK-BELLIED PLOVER.—In the collection of Mr. Anthony is a specimen of this bird, which he secured in the market October 22, 1885. The game-dealer said it was brought in but a few minutes before he purchased it. It was a young male, very fat, and was shot on a small lake near this city.

Philohela minor. AMERICAN WOODCOCK.—In a gun store in Denver, Mr. Anthony found a mounted specimen of the Woodcock, which he learned was shot on August 12, 1885.

He also learned that a second specimen had been shot in the last week of October of the same year. They were taken almost within the city limits, and our informer stated that many others were seen, but as *Gallinago delicata* is also common in the locality, we prefer to think he confounded the two species.

Phalacrocorax dilophus. DOUBLE-CRESTED CORMORANT. — About the 1st of November, 1885, one of our daily papers mentioned a bird called a 'Surf Coot,' which was on exhibition at a certain restaurant in the city. Mentioning the fact to Mr. Anthony, he started in quest of information, only to learn that the bird had been sold to some unknown person. A few days later, however, he stumbled upon the supposed 'Surf Coot,' in the possession of an amateur collector, and on examination it resolved itself into the Double-crested Cormorant. We understand it was shot about twenty miles from Denver.

Larus argentatus smithsonianus. AMERICAN HERRING GULL. — A

young bird of this species was shot November 17, 1883, and is now in the collection of Mr. Anthony. The person who shot the bird said that many other Gulls were seen, but whether they were of this species is questionable. It was shot on a small lake a few miles from the city.—HORACE G. SMITH, JR., *Denver, Col.*

CORRESPONDENCE.

[*Correspondents are requested to write briefly and to the point. No attention will be paid to anonymous communications.*]

Revival of the Sexual Passion in Birds in Autumn.

TO THE EDITORS OF THE AUK:—

Sirs: In 'The Auk' for January (p. 141), Mr. Bradford Torrey speaks of the revival of the sexual passion of birds in autumn. A similar occurrence has been observed here for two or three years past. The early winter (November and December), this year was exceptionally mild in this locality. During this weather the English Sparrows were seen building their nests and the male birds were seen hopping about the females with lowered wings and acting exactly as they do in spring. The birds were very noisy and a great deal of fighting occurred. As soon as cold weather came on all this stopped and the Sparrows found it necessary to spend all their time in securing food.

Respectfully, CHAS. KEELER.

Milwaukee, Wis., January 29, 1886.

NOTES AND NEWS.

THE Fish Commission Steamer 'Albatross' sailed from the Washington Navyyard February 15, for a cruise among the Bahamas and other islands in the West Indies. Among the islands which will be visited is Cat Island, or San Salvador, the first land discovered by Columbus. The 'Albatross' is well provided with trained naturalists and collectors, of whom Mr. James E. Benedict, Mr. Thomas Lee, Mr. W. Nye, and Mr. Chas. W. Townsend will pay special attention to the birds, of which they are prepared to make a judiciously limited and selected collection, while in no case will they jeopardize the continued existence of any local species,

however rare or limited in its habitat. The almost unparalleled success of the naturalists of the 'Albatross' last year on the island of Cozumel, where they discovered no less than 19 new birds, argues well for the exploration in which they are now engaged.

THE Ridgway Ornithological Club of Chicago, held its regular monthly meeting on Thursday evening, March 11. After the reading of the new constitution and by-laws, Mr. G. Frean Morcom exhibited the only known specimen of *Colinus ridgwayi* lately described in 'The Auk.' Mr. H. K. Coale read a paper entitled 'Six Days' Ornithological Research in St. Louis County, Mo., and St. Clair County, Ill.,' illustrated by a series of skins of the birds collected.

THE scientists of Indiana organized, on December 29, 1885, 'The Indiana Academy of Science.' D. S. Jordan, M. D., was chosen president, J. M. Coulter, Ph.D., J. P. D. John, Ph.D., and the Rev. D. R. Moore, vice-presidents, Amos W. Butler, secretary, Prof. O. P. Jenkins, treasurer, and Mr. J. N. Hurty, librarian. Curators were appointed in several departments, Mr. A. W. Butler being elected to that of Ornithology. Mr. Butler presented a paper entitled 'The Past and Present of Indiana Ornithology,' giving an account of the present status of ornithological study in that State.

THE Nuttall Ornithological Club of Cambridge has decided to issue a quarto series of 'Memoirs,' to be published at irregular intervals. They will consist of papers too long for insertion in 'The Auk,' the size of this journal proving inadequate for the reception of the larger ornithological memoirs offered it. The first Memoir of the series, just issued, is by Mr. William Brewster, and treats of the general subject of the migration of birds, giving also a detailed account of the author's valuable observations made at Point Lepreaux, N. B., during the autumnal migration of 1885.

As we go to press we are just in receipt of the concluding numbers of the volume on birds (Vol. IV) of 'The Standard Natural History,' edited by Dr. J. S. Kingsley, and published by S. E. Cassino and Company of Boston. The volume is an imperial octavo of 558 pages, illustrated with 25 full-page plates, and numerous very fine cuts in the text. The authors are Mr. W. B. Barrows, who has furnished the part treating of the Birds of Prey, Mr. Daniel G. Elliot, who has written the part relating to the Hummingbirds, Dr. J. S. Kingsley, who treats of the Parrots, and Dr. L. Stejneger, who is the author of the remainder and the principal part of the work. The work will be noticed at length in a later number of this journal.

THE A. O. U. Committee on Bird Protection continues to show a commendable degree of activity, and already its influence in behalf of the birds is wide-spread and important. It being evident that much of the wholesale slaughter in aid of the milliner's craft is due to thoughtlessness, and the apathy of the public as to the enormous magnitude of this destruction, and the evil consequences that must result from it, the Com-

mittee's first duty seemed to be to diffuse information and awaken public sentiment. Through the kind coöperation of the editor and publisher of 'Science,' and of Mr. G. E. Gordon, President of the American Humane Association, they have been able most effectively to reach the public. A supplement of sixteen pages, devoted exclusively to the subject, was published with No. 160 of 'Science' (February 26, 1886), and is to be republished as a 'separate,' under the title of 'Bulletin No. 1' of the A. O. U. Committee on Bird Protection, in an edition of over 100,000 copies, the first instalment of which is already in the hands of the Committee. It will be distributed judiciously (mainly through the coöperation of the American Humane Association) throughout the land. Copies may be had on application to the Committee, either through its chairman or any of the members, whose addresses are as follows: Geo. B. Sennett, Chairman, Am. Mus. Nat. Hist., N. Y. City; E. P. Bicknell, Secretary, P. O. Box. 2958, N. Y. City; J. A. Allen, Am. Mus. Nat. Hist., N. Y. City; William Brewster, Cambridge, Mass.; Montague Chamberlain, St. John, New Brunswick; William Dutcher, 51 Liberty St., N. Y. City; L. S. Foster, 35 Pine St., N. Y. City; Col. N. S. Goss, Topeka, Kansas; Geo. Bird Grinnell, P. O. Box 2832, N. Y. City; Dr. J. B. Holder, Am. Mus. Nat. Hist., N. Y. City.

A POWERFUL auxiliary in the work of Bird Protection is the 'AUDUBON SOCIETY,' recently founded by 'Forest and Stream.' This society is "an association for the protection of wild birds and their eggs . . . . Its membership is to be free to every one who is willing to lend a helping hand in forwarding the objects for which it is formed. These objects shall be to prevent, so far as possible (1) the killing of any wild birds not used for food; (2) the destruction of nests or eggs of any wild bird, and (3) the wearing of feathers as ornaments or trimming for dress. . . .

"The work to be done by the Audubon Society is auxiliary to that undertaken by the Committee of the American Ornithologists' Union; and will further the efforts of the A. O. U. Committee, doing detail duties to which they cannot attend. Those who desire to join the Audubon Society, established on the basis and for the purpose set forth, should send their names at once to the Forest and Stream, 40 Park Row, New York."

Recent issues of 'Forest and Stream' give ample evidence of the hearty support the Audubon Society is receiving from the public, the widely felt sympathy in its work, and the great aid it is already rendering in this excellent cause.

THE A. O. U. Code and Check-List was published March 20. It forms a volume of 400 pages, and is sold at a price so low as barely to meet the cost of publication. The Committee having the work in hand are at last through with what proved a very auduous task, which they spared no pains to thoroughly perform.